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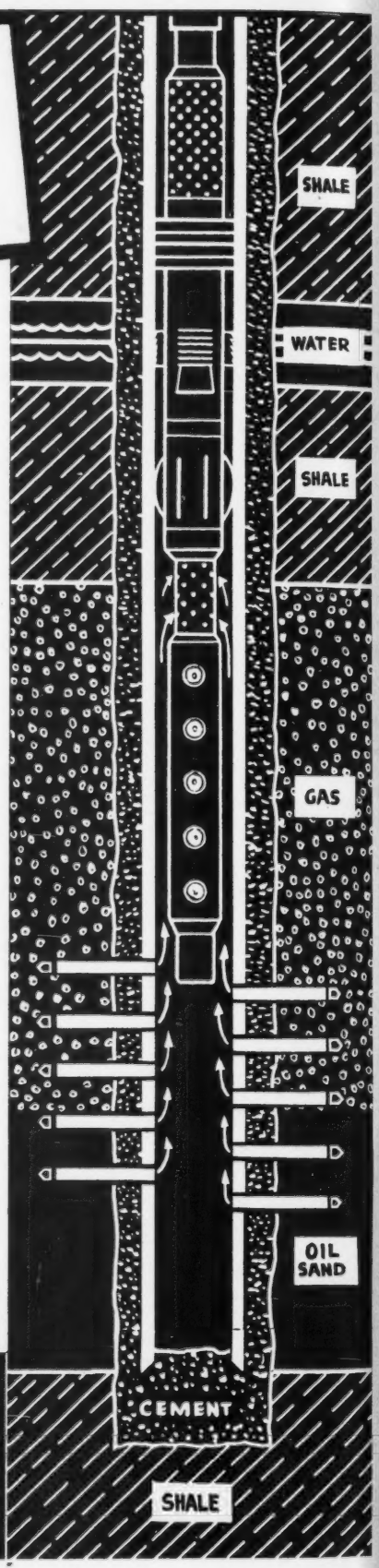

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Carrington Lung

A vitally important step in world trade relations—and one that many observers believe will open new avenues of understanding in the handling of commercial problems between nations—was taken August 8, when the Governments of the United States and Great Britain signed the long-waited petroleum agreement.

Although the agreement has not yet been ratified, and although it may later be superceded by a new pact including other petroleum producing nations, American reaction was generally favorable to the expression of mutual trust and confidence arrived at by the British and American delegations.

To the surprise of many oil experts, the United States came out of the Anglo-American discussions unscathed. Dire prophecies that this country would lose its shirt to the two high-powered British missions participating in the State Department conferences now appear entirely unfounded.

The agreement — according to Deputy Petroleum Administrator Ralph K. Davies, one of the top-ranking members of the U. S. delegation—was, in essence, "an American victory".

The International Petroleum Agreement, Davies told CALIFORNIA OIL WORLD, is "unique" and—if it succeeds in its purposes—may well point the way to readjustments in international trade in many other commodities. The agreement "looms as a very important new movement" in the industrial relation of both the United States and Great Britain, Davies believes.

Although the California oil executive was enthusiastic in his appraisal of the new pact, he emphasized the fact the oil agreement will stand or fall upon the choice of representatives — made by Prime Minister Churchill for Great Britain, and by President Roosevelt for this country — to the International Petroleum Commission established under terms of the agreement.

Men of "influence, reason and persuasion" will be needed to make up eight-man commission (four representatives for each country) Davies pointed out, if the important responsibilities with which they are charged are to be effectively carried out. . . . The commission members must have "stature and ability", he added, and under no circumstances should politics be permitted to enter into the appointments.

"If the appointments are political, we can just forget this and get on to something else," Davies declared.

American worries over the permanence of some of the most valuable oil concessions in the world—namely, those of Saudi Arabia and Kuwait—were set at rest by the outcome of the Anglo-American discussions, the Deputy Petroleum Administrator stated. Davies considers the agreement "an insurance policy on American foreign oil,"—particularly in those locations under British influence.

Praising the British for their cooperation, he pointed out that the new agreement is virtually a "death blow" to cartel-type agreements—such as the Red Line and Kuwait agreements. If the agreement can be carried out and the friction which has existed over foreign oil development erased, cartels in other important commodities may later be ended through similar international pacts, he indicated.

Davies predicted that other big oil-producers, such as Russia, Venezuela and Columbia, would enter the picture "very quickly." Ratification of the agreement and the appointment of the commission he expects in the near future,—possibly within a month.

California — as an important prewar exporter of petroleum products —should take an interest in the International Petroleum Agreement, Davies declared. Arrangements made with respect to the equitable distribution of petroleum supplies will have a world-wide effect on markets.

The flow of cheap oil from the Middle East and from the South Pacific and East Indies—where discoveries of importance were being made just before the war—will be of particular interest to California oil men, he believes, as California producers may find considerable competition with cheap oil when the war is over.

The Deputy Petroleum Administrator further predicted the agreement would have a stimulating ef-

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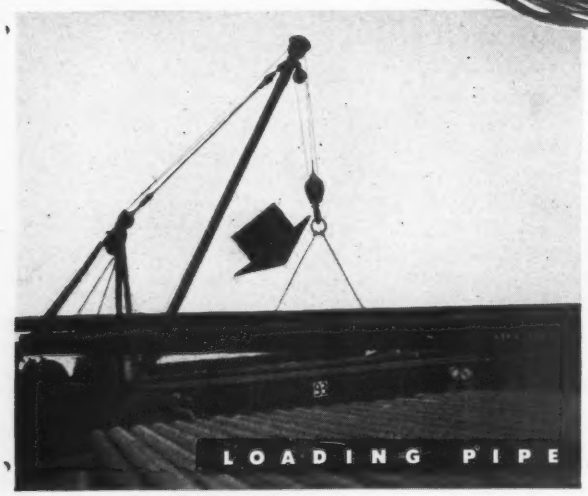

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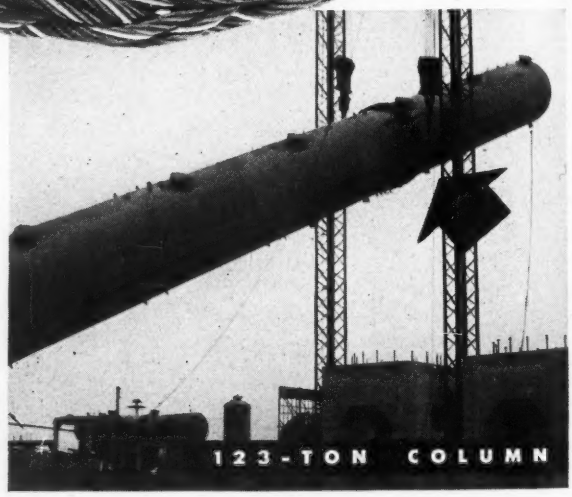

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fect on the refining branch of the industry. American Refining capacity in the Middle East will be enlarged after the war and this country also will play an important part in supplying equipment for the restoration of European refineries demolished during the war or made obsolete through war-time shortages.

The American press and public reacted favorably, on the whole, to the announcement that Acting Secretary of State Edward R. Stettinius, Jr., and Lord Beaverbrook, Great Britain's Lord Privy Seal, had signed an agreement which many believe is the first step toward ending nationalistic restrictions which have hampered United States development of her foreign-held oil resources throughout their history.

In some quarters suspicion was expressed that restrictive devices might later be developed, but the petroleum agreement was generally welcomed as a new "entente cordiale" between the two nations and an instrument which — if properly used—will encourage petroleum exploration and development throughout the world. With an earnest and hard-working bi-national group committed to a study of world supply and demand and of all controversies threatening the success of the program, the oil industry at last will have a "friend at court" in high Government circles, it is felt.

Much speculation naturally surrounds the appointment of the Petroleum Commission. The task of selection will not be easy. The four-man American group will be stacked against a British commission certain to include men wise in the ways of foreign oil development. The Americans named by the President must be equally wise; acceptable to the U. S. oil industry and untainted by politics.

At this time there is much discussion of whether one or more members of the American group should be taken from the industry itself. Such a selection, some observers believe, would lead to bitterness and suspicion within the industry. It is also pointed out that there are probably few men, among our leading oil executives, who would care to accept such an offer.

Another intriguing source of speculation is the possible effect a change of Administration might have on the new-fledged venture. Would a Republican Administration approve the selection of Mr. Roosevelt? Would there be an attempt to change the policy agreed upon at the recent conferences? Or, perhaps, to terminate the agreement?

Until the commission has been named — and approved — no really important further developments can be expected. The American and British delegations have been complimented on reaching an understanding that may lead the way to a new era of international economic collaboration. If the organization contemplated by the agreement can be worked out with the same rationality that was brought to the recent conferences, the American oil industry may look forward to a peaceful and prosperous period in its foreign relations.

AGREEMENT ON PETROLEUM BETWEEN THE GOVERNMENT OF THE UNITED STATES OF AMERICA AND THE GOVERNMENT OF THE UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND

Introductory Article

The Government of the United States of America and the Government of the United Kingdom of Great Britain and Northern Ireland, whose nationals hold, to a substantial extent jointly, rights to explore and develop petroleum resources in other countries, recognize:

1. That ample supplies of petroleum, available in international trade to meet increasing market demands, are essential for both the security and economic well-being of nations;
2. That for the foreseeable future the petroleum resources of the world are adequate to assure the availability of such supplies;
3. That such supplies should be derived from the various producing areas of the world with due consideration of such factors as available reserves, sound engineering practices, relevant economic factors, and the interests of producing and consuming countries, and with a view to the full satisfaction of expanding demand;
4. That such supplies should be available in accordance with the principles of the Atlantic Charter and in order to serve the needs of collective security;
5. That the general adoption of these principles can best be promoted by international agreement among all countries interested in the petroleum trade whether as producers or consumers.

ARTICLE I

The two Governments agree that the development of petroleum resources for international trade should be expanded in an orderly manner on a world-wide basis with due consideration of the factors set forth in paragraph 3 of the Introductory Article and within the framework of applicable laws or concession contracts. To this end, and as a preliminary measure to the calling of the international conference referred to in Article II below, the two Governments will so direct their efforts, with respect to petroleum resources in which rights are held or may be acquired by the nationals of either country:

1. That, subject always to considerations of military security and to the provisions of such arrangements for the preservation of peace and prevention of aggression as may be in force, adequate supplies of petroleum shall be available in international trade to the nationals of all peaceable countries at fair prices and on a nondiscriminatory basis;
2. That the development of petroleum resources and the benefits received therefrom by the producing countries shall be such as to encourage the sound economic advancement of those countries;
3. That the development of these resources shall be conducted with a view to the availability of adequate supplies of petroleum to both countries as well as to all other peaceable countries, subject to the provisions of such collective security arrangements as may be established;
4. That, with respect to the ac-

(Continued on Page 25)

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Paloma Cycling Plant Now in Operation

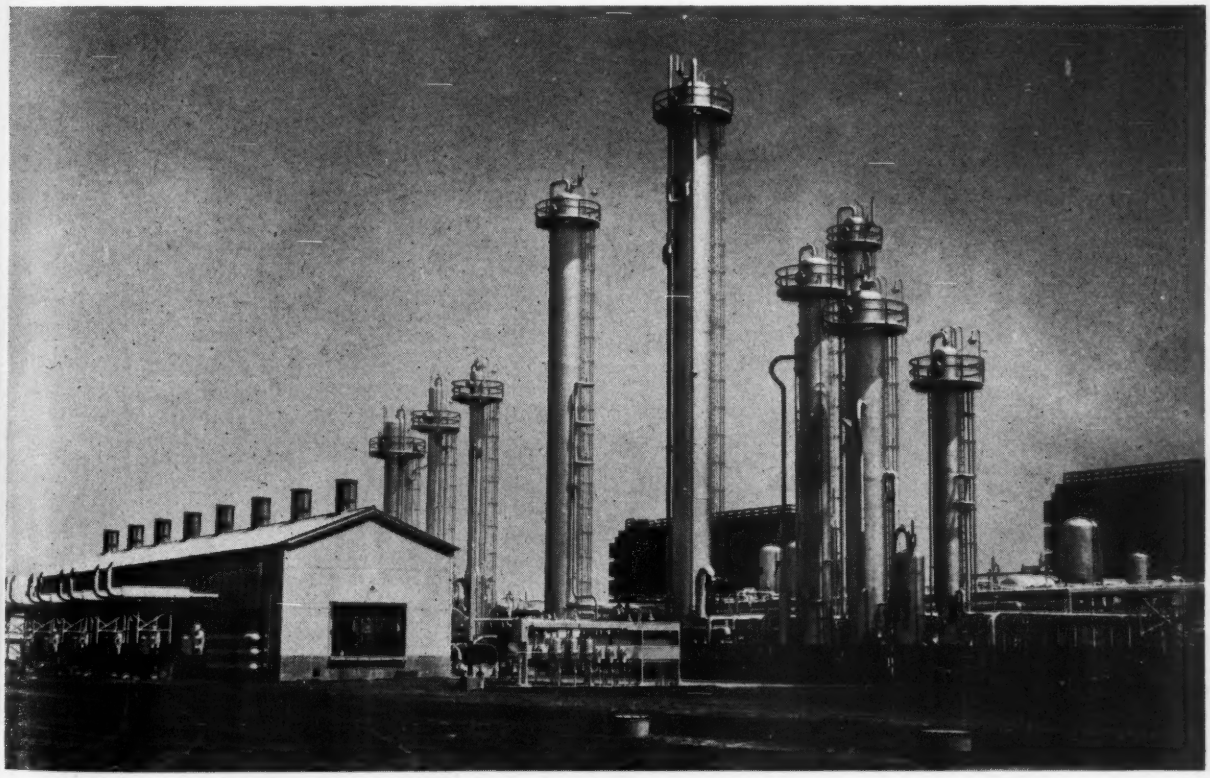
This is the first report on the Paloma Cycling Plant since that plant went on stream June 10, 1944. The CALIFORNIA OIL WORLD delayed taking photographs of the plant until it was completely furnished and the equipment put into operating condition. A flow plan of the plant, a detailed description of the process employed and a summary of operations in the Paloma field were published in the First Issue of February 1944 so these data are not repeated here.

The Paloma Plant is not only the first cycling plant in California but is also one of the most modern, if not the most modern, built to date. It has a capacity of 50,000,000 cubic feet of overhead flash vapors and will probably be operating at this capacity within a very few weeks. At the time data for this report were obtained it was taking the condensate-gas production from three producing wells and putting residue dry gas back into the productive zone through four injection wells. More wells are being added to serve the plant as they are completed.

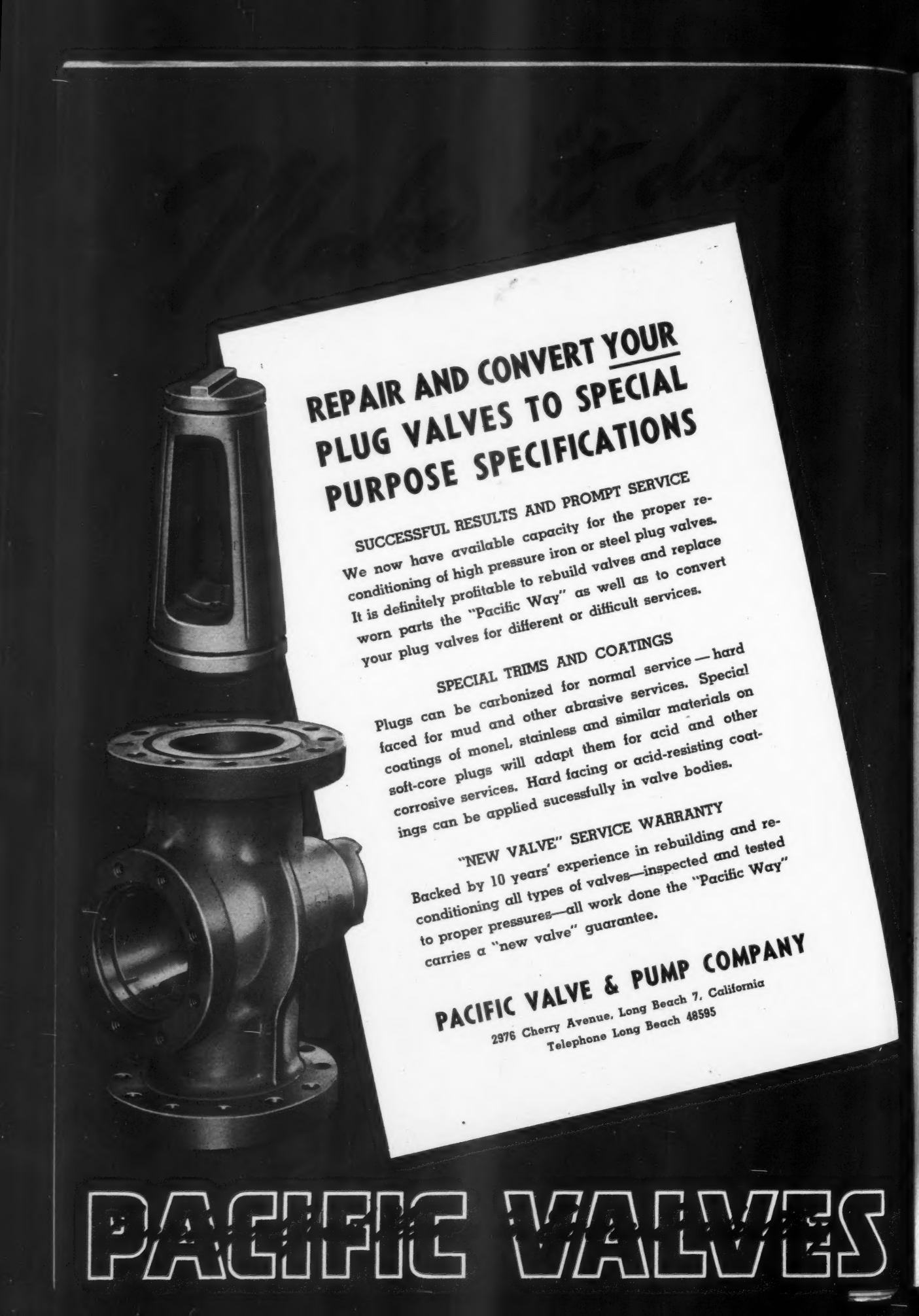
The plant is located in the Paloma field, 22 miles southwest of Bakersfield, and takes production from the Paloma sand section at a depth of approximately 10,000 feet. This section consists of approximately 180 ft. of net sand thickness extending through some 500 ft. of zone. The plant was constructed and is being operated, and the field is being developed under a unit plan for cycling the Paloma sand section. The following six companies are, at the present time, participating in the Paloma unit: — Western Gulf Oil Company, The Texas Company, Ohio Oil Company, Union Oil Company of California, General Petroleum Corporation and Barnsdall Oil Company. Operations of the field and plant are conducted by Western Gulf Oil Company under the direction of the Paloma Operators' Committee, which consists of members of the six companies and of which R. P. Huggins, general manager of Western Gulf Oil Company, is chairman. The plant superintendent is R. M. Dillard.

The present unitized area covers approximately 2800 acres but this may be extended to include additional acreage if and when producing wells are drilled outside the unit boundaries by any of the companies holding outside acreage. A black oil band has been found to exist on the northeast side of the field and this also comes under the unit operations. Due to the slower development of this band and incomplete data as to its extent at the present time, no facilities have been provided for handling the black oil production. Plans are being made, however, for producing black oil and for processing in the cycling plant the wet gas accompanying its production.

The Paloma Operators' agree-



General view of the Paloma Cycling Plant.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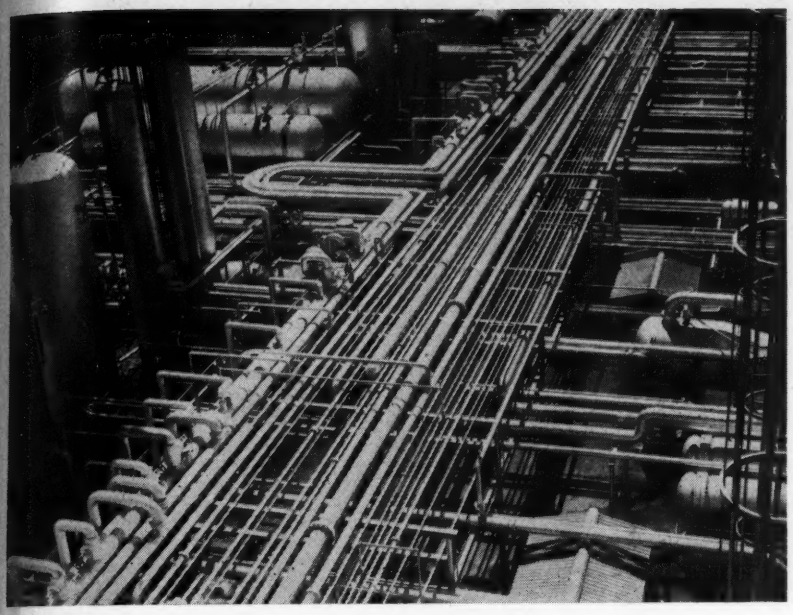


The arrangement of the overhead piping is here indicated.

ment does not cover the development of any zone which may be productive in the Paloma field other than the Paloma sand section.

Control of Producing and Injection Wells

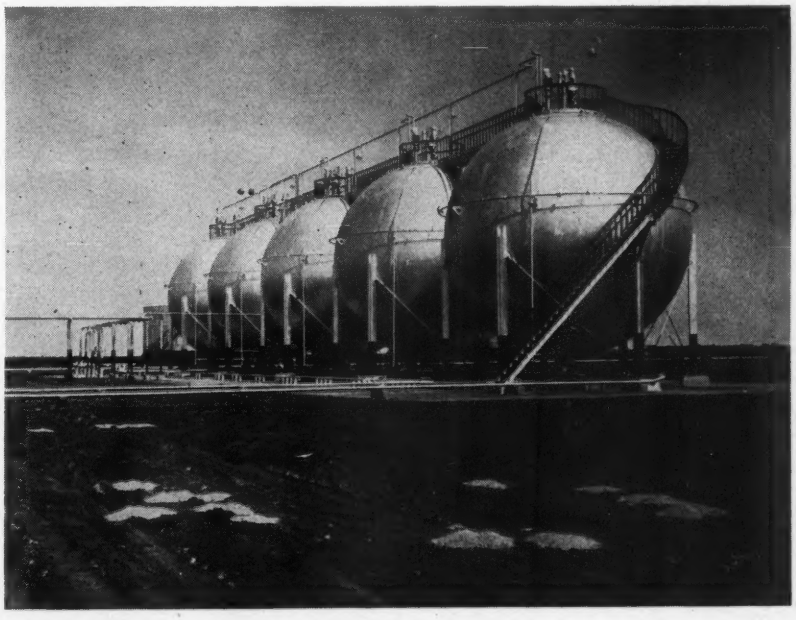
Because of corrosive soil conditions, all lines connecting the producing and injection wells to the plant are laid above ground. These lines are 3½-in. OD, XX pipe good for 5000 p.s.i. working pressure and are insulated throughout their entire length to insure uniform temperature conditions of the flow of production to the plant and to prevent formation of hydrates in the gas injection lines. The wells produce at pressures ranging from 2200 to 3000 p.s.i. and this pressure is reduced to 2000 p.s.i. at the plant. The wet gas is cooled to 100° F. before being processed. The dry residue gas is compressed to 4300 p.s.i. for injection into the input wells, the temperature of this gas being maintained at approximately 190° F. at the plant.

A header system at the cycling plant provides for control of the flow of condensate and gas from each producing well and of the flow of dry residue gas to each injection well. The lines to and from the individual wells are equipped with orifice meters at the plant header for measuring the production from or the injection gas to each well. By means of this header system each well may be operated independently without going into the field, flow to or from the plant being regulated or shut off completely at this point. A test separator is located at the header and provides for testing any well at any time. This facilitates checking flow conditions of individual wells and provides a means of backflowing injection wells in case of sand plugging.

Plant Operation

The condensate is separated from the gas in four pressure stages and is then debutanized. The overhead wet gas vapors from each stage is passed through absorption towers operated at relative pressures and, after distillation, the recovered liquids are fractionated together with the overhead from the condensate debutanizer. The dry residue gas, except that required for plant fuel, is returned to the field. Detailed description of the process is given in the issue previously mentioned.

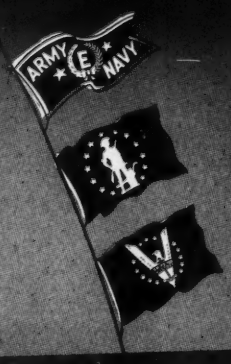
The products now being recovered at the plant are debutanized condensate, natural gasoline and butanes. An impure liquid propane now being formed is injected into the formation but equipment may readily be added for processing propane when the demand for this product arises. Most of the debutanized condensate and a greater part of the natural gasoline are taken by The Texas Company. These products are transported through a 6-in. pipe line (under a pressure of approximately 450 p.s.i.) connecting to the Emidio Station of the General Petroleum Corporation. All of the butane and small amounts of natural gasoline and condensate are shipped by truck, a truck loading rack having been erected at the plant.



Three of these five 2500-bbl. Hortonspheres are 100-p.s.i. working pressure for storage of butane; the other two are 50-p.s.i. working pressure for natural gasoline.

3,600 H.P. of CLARK

Battery of Clark 6-Cyl., 600 H. P. Angle Compressors, Paloma Cycling Plant



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The Paloma Cycling Plant, California's first, and one of the world's most modern, with a capacity of 50,000,000 cubic feet of overhead flash vapors, went on stream June 10th, at the Paloma Field. Owned by six companies and serving a unitized area of 2,800 acres, it takes condensate gas from the Paloma sand section at 2,200 to 3,000 p. s. i., removes and debutanizes the condensate, and returns the dry gas to the sand at 4,300 p. s. i.

Six Clark 600 H. P. "Angles" provide for 4-stages of gas re-compression. These stages are split over the entire group of units, so that if one goes down, the services are reduced proportionately. Operation of the plant has been made as automatic as possible, to increase safety and efficiency.

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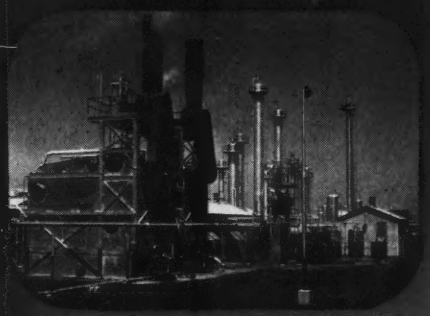

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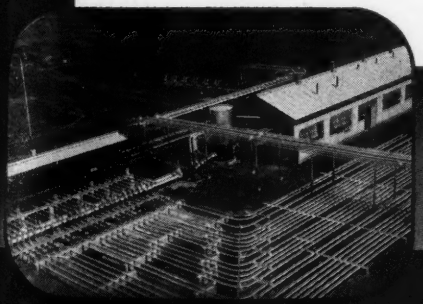
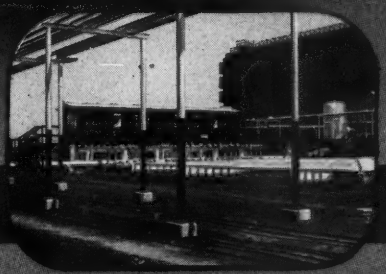
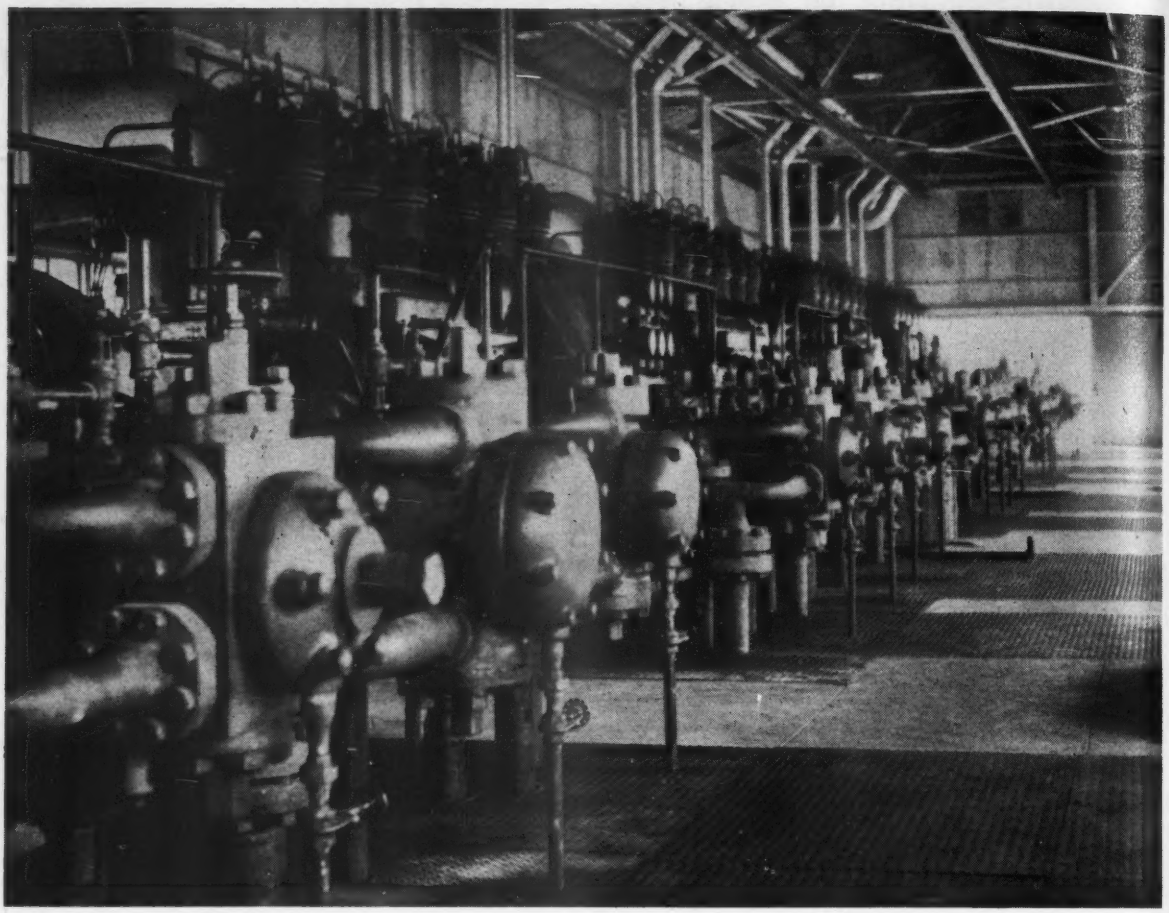






An interior view of the compressor plant in which are six Clark 6-cylinder angle compressors of 600 h.p. each.

Compressors

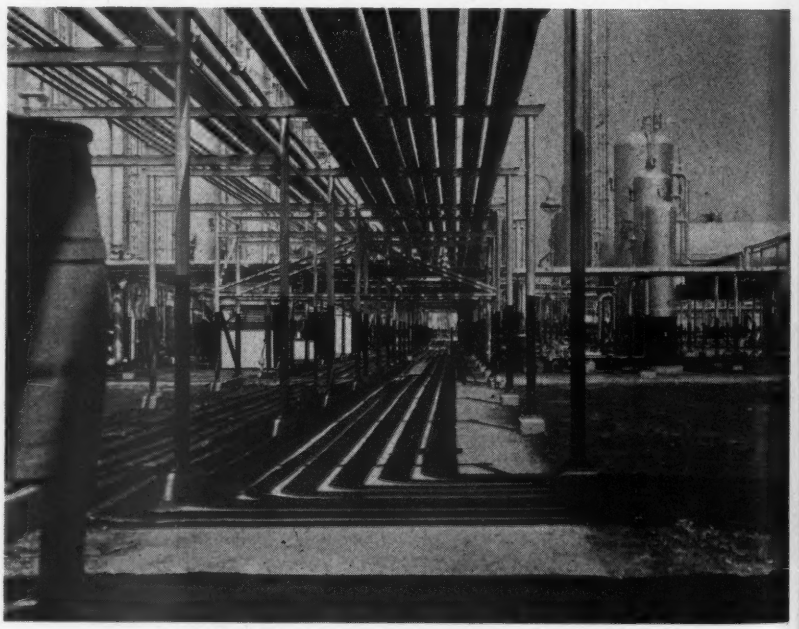
Six 6-cylinder, 600 hp. Angle compressors furnishing a total capacity of 3600 hp. provide for recompression of gases from 75 to 300 p.s.i., from 300 to 800 p.s.i., from 800 to 2000 p.s.i. and from 2000 to 4300 p.s.i These four stages of compression are split over the entire group of engines so if any one engine goes down the services are reduced more or less proportionally. The arrangement of cylinders to accomplish this is as follows:—

Five compressors have two 4300 p.s.i. discharge cylinders; one compressor has three 4300 p.s.i. discharge cylinders. A total of 13 cylinders is therefore available for injection of dry residue gas into the sand.

Each of the six units has one 800 to 2000 p.s.i. discharge cylinder.

Two units have one each of 300 to 800 p.s.i. discharge cylinders.

Two units have one each of 75 to 300 p.s.i. discharge cylinders.



Compact and effective arrangement of equipment facilitates operation of the Paloma cycling plant.

One unit has a common spare for use between the two low-pressure services.

All compressor discharge cylinders are equipped with pop valves and rupture discs.

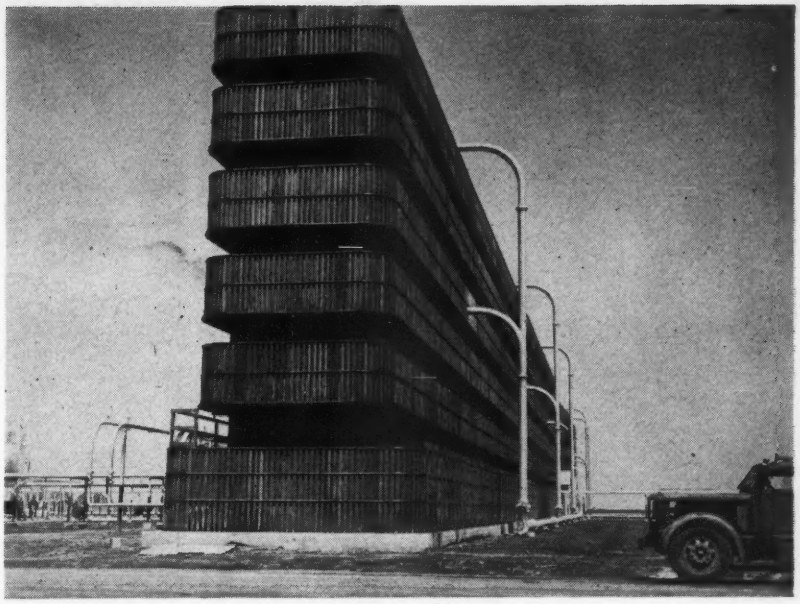
Other Equipment

Steam for plant operation is generated by two 540 hp. water-tube boilers. One 15,000,000 B.t.u. furnace is used for fat oil service and another 15,000,000 B.t.u. furnace for reboiler service. A 500,000 B. t. u. furnace is on reclaimer service.

Two cooling towers are employed, one for process cooling and a smaller one for cooling the engine water. Four centrifugal pumps, one of which is a spare, handle the water to the process cooling tower. Two other centrifugal pumps furnish the water to the engine water cooling tower. The total water pumped to the two towers is 12,500 g.p.m.

A closed circulating system is used for engine cooling and the jacket water is circulated by power pumps driven by 100 hp., 6-cylinder, gas engines. One of these pumps is shared between the engine water tower pumps and jacket water pumps as a common spare.

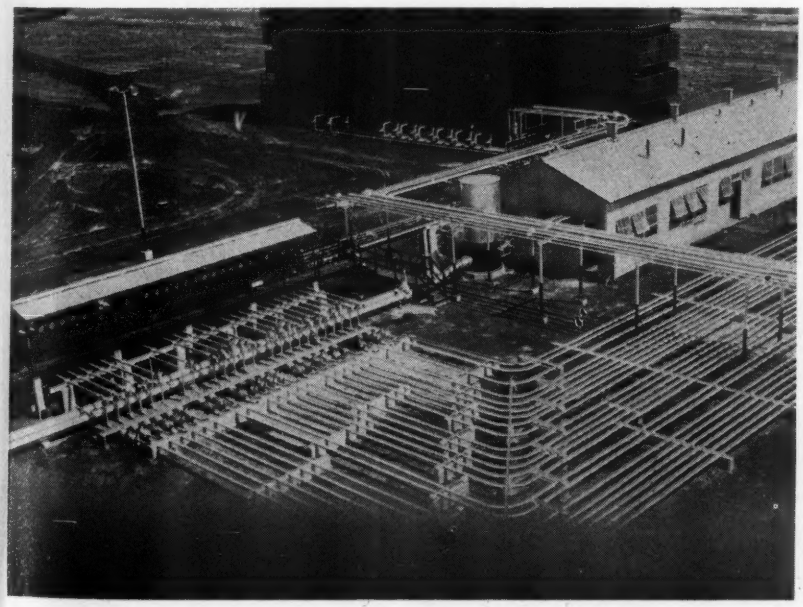
In the process work, nearly all the reciprocating pumps employed discharge at 110 p.s.i. back-pressure on exhaust steam. The turbines in service exhaust inot a 5-lb. steam system which returns to boiler preheaters.



This Fluor cooling tower and a smaller one of same construction directly behind the one shown provides cooling facilities for plant operation and for cooling engine jacket water.

Five 2500-bbl. Hortonspheres and three 10,000 bbl. standard A.P.I. bolted tanks are used for storage of products. The butane goes to three of the Hortonspheres having working pressures of 100 p.s.i. The natural gasoline is stored in the other two Hortonspheres with working pressures of 50 p.s.i. The debutanized condensate is stored in the three 10,000-bbl. tanks at atmospheric pressure.

A completely equipped laboratory provides for control of products to specifications, samples of liquid being taken at any point in the process for analysis. The laboratory contains all the equipment generally employed in a natural gasoline plant but includes a Podbielniak hydrobot, low temperature, fractional distillation apparatus and a charcoal unit.



The central control station showing lines to and from the field. The American-Metric meters, which measure all gas in and out of the plant, are the highest working pressure meters in the California oil industry, working at 5,000 lbs. To the right rear can be seen one of the pump houses and one cooling tower.

Importance of Safety Recognized

The Paloma cycling plant is extremely compact and has been made as automatic as possible to increase safety and efficiency in operation. All lighting is controlled from a central switch station but switches are provided at local points. An intercommunicating telephone system has been installed with nine stations placed at the most advantageous locations.

Among the automatic devices used are liquid floats on the suction lines connecting the separators with the compressors. When the liquid in any one scrubber rises too high, a red light is flashed on a panel and an audible alarm is sounded. If the light is not seen or the alarm not heard, the magneto of the engine that is on the particular service concerned is grounded and the compressor stopped. All compressor

Separators, absorbers and other towers of the distillation equipment in the Paloma Cycling Plant.

units in the plant can be manually grounded at one point.

A controlled valve on the production manifold at the header system maintains a down-stream pressure of 2000 p.s.i. Should this pressure drop to approximately 1600 p.s.i. the valve automatically shuts off all gas into the plant. This valve can also be closed from two points in the plant from which a solenoid can be manually operated.

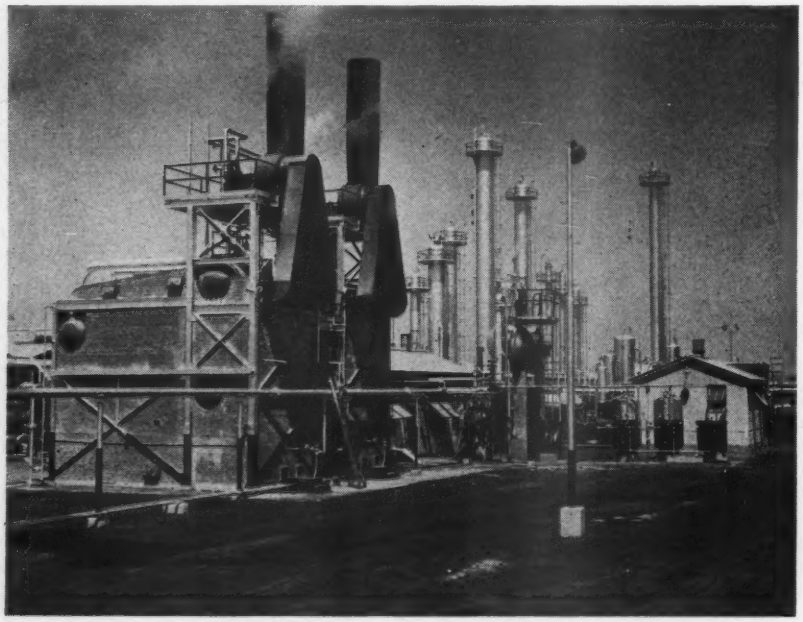
All piping except that used for fire protection mains and waste lines is above ground. The fire protection lines consist of a loop system of underground water mains. This loop is provided with block valves to route water to any point in the plant if the lines are damaged at any place.

Fog nozzles have been installed on each Hortonsphere, one band being around the sphere at its equator and another around the top. Hose carts with fog nozzles and applicators are located throughout the plant area with connections to the water mains at necessary points.

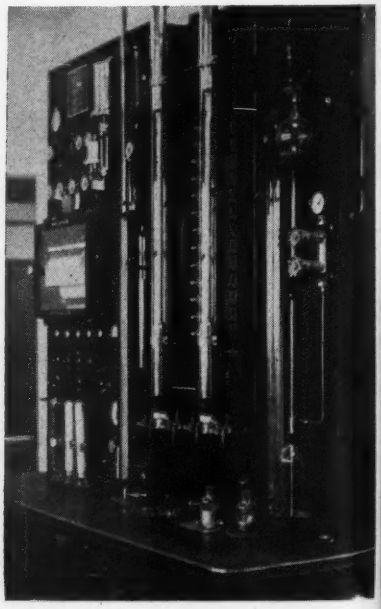
A foam generator has been installed at the storage area and this is connected to foam chambers on each of the 10,000-bbl. tanks. Another foam generator is at the opposite end of the plant. In addition to these more or less fixed fire control devices, portable foam generators and small foam and CO_2 containers are distributed around the grounds.

Built on Old Lake Bed

The Paloma field is situated near the present Buena Vista Lake and the plant is located on the high part of the old lake bed. The higher and lower areas are separated by a dike but because there is always the possibility of water rising in the lower lake bed to a height sufficient to cover the entire area, a levee has been built around the plant and its storage facilities to insure that it is never flooded. The plant having been built on the old lake bed, all foundations had to be carried from 10 to 15 ft. below the ground surface in order to secure suitable bearing. All foundations are of concrete and the buildings are of steel and Transite construction.



Steam is generated by these two 540 h.p. Water Tube Boilers.



Part of the laboratory equipment is shown here.

Operation of the Central Gas Plant at the General Petroleum Refinery, Torrance, California

RANDAL MAASS, Refinery Engineer
General Petroleum Corp.

August Meeting

Introduction

There have been times when sufficient normal butane was available so that the sale of LPG has been limited by the available propane. Under such conditions, the value of propane is enhanced to such an extent that additional efforts can be made to increase its extraction. At the present time large portions of the normal butane supplies are being used for the manufacture of butadiene, for isomerization to isobutane, and for furnishing volatility to the heavy gasoline stock now used for motor fuel. With the normal butane thus diverted, sufficient propane is readily available for blending with the limited amount of normal butane allotted to LPG sales and no unusual efforts need be made to increase its extraction. It may be possible to increase this propane demand somewhat by developing the market for pure propane fuel.

In the treatment of refinery gases, the presence of valuable unsaturates makes high extractions economically attractive because of the recovery of these components. That is, if a high propene extraction is sought, a high propane extraction is a natural result. At our Torrance refinery we have installed, in connection with our 100 octane plant, a 11,000 Mcf/-Day gas plant designed to handle vapors from the entire refinery. For the first several months of its operation only a portion of its 600 Gal/-Min. oil circulation capacity was needed to meet design extractions. The excess capacity was therefore used to increase extractions above design. The results of these operations are being presented to you tonight with the hope that they may be of some benefit to you in the event you should again desire a high propane extraction. In addition, this paper will perhaps show the contrast as well as the similarities in the handling of refinery vapors as compared to natural gases.

Results Obtained at the Gas Plant

The results we have obtained at our Central Gas Plant are plotted in Curve I. In this curve the percentage extractions for the various components are plotted against the absorption factors. The solid curve is the operating line representing the over-all plant extraction; whereas, the dotted curve represents the extractions obtainable for a single four theoretical plate absorption. Looking at the points that represent the propane extraction we see that they range from well above 80% down to almost 60%. The gradually decreasing extraction is a result of an increasing load at the absorption plant.

The Gas Plant was first started in October, 1943. Being the first of the new 100 octane units to be started, it operated only on the vapors from the old refinery; that is, from the VisBreaker, Reformer and Straight Run units which amount to about 4,000 Mcf/day. The Alkylation unit was placed in operation in January, 1944. However, this unit contributes less than 500 Mcf/Day. Two T.C.C. units were placed in operation in March, 1944, which added 3,500 Mcf/Day. The last of the four T.C.C. units has just been placed in operation and the total T.C.C. gas now amounts to 7,000 Mcf/Day, bringing the total to the Gas Plant to about 11,000 Mcf/Day. At times this volume may increase to 13,000 Mcf/Day. Since three or four million of this volume is low pressure gas and goes directly to the low pressure absorber, a large proportion, that is about 70%, of the oil circulation is used at the low pressure absorber. To reduce this demand we are making use of some compressor capacity that is available a large part of the time to compress this low pressure gas for high pressure absorption. Thereby we hope to again approach 80% propane extraction. Eventually compressor capacity will be available for the full time compression of this low pressure gas.

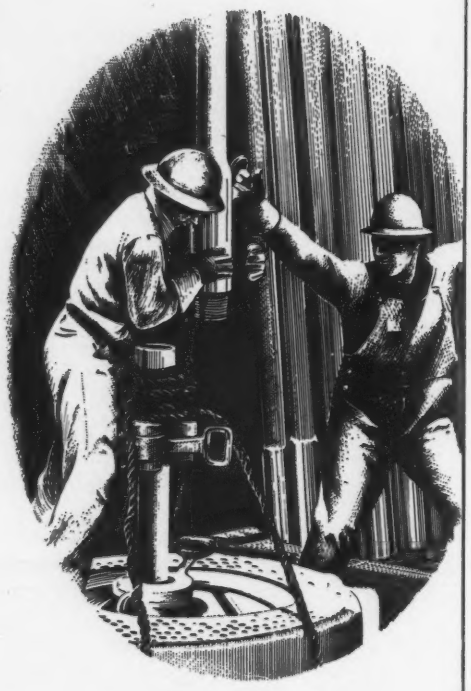
Curve I also shows the average extractions obtained from October, 1943, through April, 1944. You will note that average propane extraction was 76.5% and the isobutane extraction 97.8%. Curve I has also been used to determine what our extractions will be on the average when we again attain 80% propane extraction. These extractions are tabulated in Table I. For a propane extraction of 80% we will obtain an isobutane extraction of 98.4% which is materially above the design estimate of 94%. Constituents heavier than isobutane for all practical purposes are completely absorbed. Along with the propane, we will extract about 73% of the propene in the gas with relatively small amounts of ethane and hydrogen sulfide. To obtain these extractions it is necessary with our process to use a propane absorption factor of 1.21 which corresponds to a normal butane absorption factor of 4.07. These factors are considerably higher than normally employed in gas absorption plants.

The type of gas we handle contains about 20% hydrogen, 3% nitrogen and 30% methane. The total ethane and lighter content of our wet gas runs about 68% which is not too far removed from the type of wet gas treated in natural gas plants. The extract, however, is made up of principally C_3 and C_4 compounds. The C_5 content is about 7½% with no appreciable hexanes and heavier. The dry gas, because of its high hydrogen content, has a heating value in the neighborhood of the familiar 1100 Btu/ft^3.

Process

The process used in obtaining the above extractions is diagrammatically illustrated in Figure 1. The plant is a standard two stage absorption plant in which the rich oil from the 120-lb. high pressure ab-

Compare



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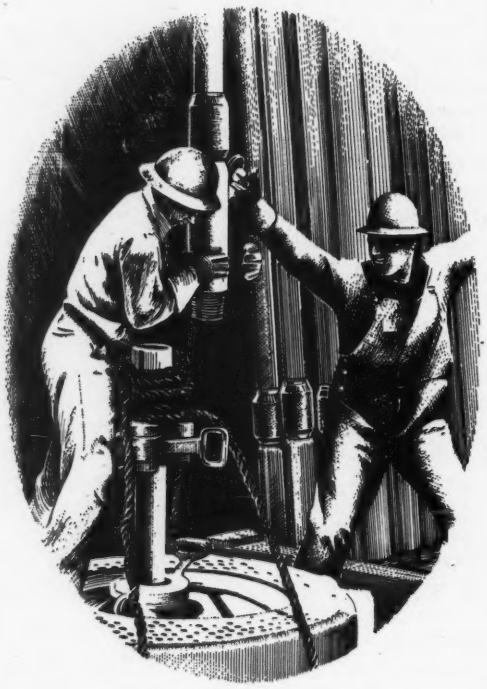

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TABLE I
WET GAS & PRODUCTS
REFINERY GAS PLANT
80% PROPANE EXTRACTION

Constituent	Wet Gas Mol. %	Absorption Factor	% Extracted	Extract Liq. %	Dry Gas Mol. %
Hydrogen	19.6		0		27.6
Nitrogen	3.1		0		4.3
Methane	29.7	0.044	0		41.6
Ethene	3.1	0.24	0		4.3
Hydrogen Sulfide	2.2	0.355	7.5	0.3	2.9
Ethane	10.0	0.37	9.3	2.7	12.7
Propene	6.7	1.03	72.7	15.0	2.6
Propane	13.9	1.21	80.0	36.7	3.9
Isobutane	4.1	2.93	98.4	15.8	0.09
Butenes	3.2	4.07	99.7	11.5	0.01
N-Butane	2.7	4.07	99.7	10.4	0.01
Isopentane	0.4	11.0	100.	1.9	
Pentenes	0.6	14.4	100.	2.6	
N-Pentane	0.7	14.4	100.	3.1	
Total	100.0			100.0	100.0
Volume	11000 Mcf/Day		90760 Gals/Day		7830 Mcf/Day

TABLE II
ABSORBER OPERATING CONDITIONS
REFINERY GAS PLANT
80% PROPANE EXTRACTION

	High Pressure Absorber	Low Pressure Absorber
Pressure	120#	35#
Temperatures		
Lean Oil	75°F	75°F
Top Intercooler, In/Out	85°F/80°F	
Bottom Intercooler, In/Out	83°F/80°F	82°F/80°F
Bottom Tray	100°F	90°F
Rates		
Wet Gas	11,600 Mcf/Day	1,690 Mcf/Day
Dry Gas	7,200 Mcf/Day	630 Mcf/Day
Lean Oil	380 Gals/Min	120 Gals/Min
Lean Oil/Dry Gas	76 Gal/Mcf	270 Gals/Mcf
Propane Abs. Factor	1.21	1.21

TABLE III
RICH OIL FRACTIONATOR
OPERATING CONDITIONS
REFINERY GAS PLANT
80% PROPANE EXTRACTION

Reflux. Accum. Press.	115#
Tower Press.	120#
Feed Rate	680 Gals/Min.
Top Product Rate	80 Gals/Min.
Reflux Rate	160 Gals/Min.
Reflux Ratio	2/1
Top Temperature	200°F
Bottom Temperature	520°F
Bottoms Circulation	500 Gals/Min.
Heat Load	20 M*Btu/Hr.

Lean Oil	
Gravity	45° API
Initial	275°F
10%	280°F
50%	320°F
90%	370°F
E.P.	450°F
V.P. 10 m.m. of Hg. @	100°F

sorber is flashed in the bottom of the 35-lb. low pressure absorber. The combined rich oil stream is vented at 15-lbs. and the vent gas recycled via a compressor back to the high pressure absorber. The Raw B-B extract and the lean oil are separated in a thirty-plate rich oil fractionator using Raw B-B as reflux and a forced circulation, direct fired heater operated at 520°F as a reboiler. The reflux accumulator is operated at 115 lbs. so as to retain all the C_3 and C_4 fractions. The uncondensed vapors from the reflux accumulator are cycled to the low pressure absorber.

The dry gas from this plant is used as refinery fuel. The Raw B-B extract, together with the Raw B-B from the other refinery units, is used as charge stock to the HF Alkylation unit, after the C_3's and normal pentane and heavier have been removed.

Equipment Design

Table V lists the essential design features of the several towers in this plant. The high pressure absorber is a 6-ft. vessel with 26 single cross-flow bubble trays. In addition, the tower is provided with two boots to accommodate the removal and return of two intercooling streams placed one-third of the way and two-thirds of the way down the tower. These boots are a solid tray provided with a vapor chimney in the center. The intercooler pump takes suction at the inlet weir and discharges at the outlet weir. Diametrically across the center of the plate and parallel to the inlet and outlet weirs, a third weir is placed which is somewhat lower than the outlet weir. Since the intercooler pump may circulate more or less than the downflow, this third weir provides a means of transferring fluid from the discharge section to the suction section, or vice versa, and yet tends to keep the hot and cold oil separated.

The low pressure absorber is a 5-ft. vessel also equipped with 26 single cross-flow bubble trays and provided with the two boots. This tower, however, is operated at present with intercooling at the lower position only. The results plotted in Curve I are therein compared to a four plate theoretical absorption curve. Four theoretical plates out of 26 represent an efficiency of 15%. This efficiency corresponds with that predicted from the correlation of Drickamer & Bradford[1] for our lean oil viscosity at operating conditions of one centipoise.

The rich oil fractionator has a 7-ft. rectifying section with 15 single cross-flow bubble trays. The stripping section is a 9-ft. 6-in. tower equipped with 15 double bubble cross-flow bubble trays.

Operating Conditions

Table II lists the operating conditions that prevail at the high pressure and low pressure absorbers for an 80% extraction. The 120-lb. high pressure absorber requires a lean oil to dry gas ratio of 76 Gals/Mcf in order to provide the required propane absorption factor of 1.21. The 35-lb. low pressure absorber requires a ratio of 270 Gals/Mcf for the same propane absorption factor. You will note that at these high oil rates the intercoolers provide only a relatively small amount of intercooling.

Table III lists the operating con-

[1] Dricknamer & Bradford, "Overall Plate Efficiency of Commercial Fractionating Columns as a Function of Viscosity", Petroleum Refiner, Vol. 22, No. 10, 1943. pp 105-110.

FIGURE 1

SCHEMATIC DIAGRAM OF CENTRAL GAS PLANT

GENERAL PETROLEUM CORPORATION, TORRANCE.

ditions for the rich oil fractionator under 80% propane extraction. The reflux accumulator is operated at 115 lbs. and at about 80°F to 100°F. The tower itself rides directly on the reflux accumulator pressure and the tower pressure runs approximately 120 lbs. The tower is operated with a reflux ratio of about 2 to 1 on the top product. With a bottom temperature of 520°F the vapor pressure of the resulting lean oil is about 10 m.m. of mercury at 100°F. This vapor pressure is somewhat higher than that normally desired for natural gas operations where the equilibrium oil loss in large dry gas volumes becomes appreciable. In order to obtain the 520°F at the bottom of the tower, the furnace outlet runs 550°F which is the maximum to which we wish to go so as to avoid any appreciable cracking. To obtain a lean oil vapor pressure of about 4 m.m. of mercury the tower pressure with the bottom temperature held at 520° F, would have to be reduced to about 75 lbs. This would be feasible in a natural gasoline plant with its lower vapor pressure extract. At our plant the high volatility of the extract requires a high operating pressure and the consequently high lean oil vapor pressure with its resultant small loss. The analyses of our dry gases which are performed on a mass spectrometer occasionally show traces of heavy ends.

Because of the higher pressures employed at the reflux accumulator and the rich oil vent tank the intermediate flash vapors are kept to a reasonable size. They are, however, sufficient to very effectively remove the greater portion of the ethane and lighter constituents from the extract. The volumes and compositions of the three plant flashes, that is, the low pressure absorber flash, the rich oil vent flash, and the reflux accumulator flash, are tabulated in Table IV. The deviation in Curve I of the plant extraction curve from the four theoretical plate extraction curve illustrates the effectiveness of these flashes in removing the light constituents from the extract. Of course some sacrifice is made in the propane and isobutane extract to attain these separations.

Application to Natural Gas Extractions

This discussion has to some extent illustrated the similarity of refinery absorption plants and natural gas absorption plants. On the other hand you have perhaps gathered that the principal difference between the two rests on the fact that our extract is much more volatile than natural gasoline. Consequently, a high pressure level must be used in the flash system so as to still retain the bulk of the extract with flashing off the undesirable light components. In natural gasoline plants where the extract can contain in the neighborhood of 50% of pentanes and heavier, the flash pressures must be commensurately reduced in order to effect the removal of the light constituents.

Table VI summarizes the results obtained in a natural gasoline plant which attained a 77% propane extraction. This plant was of a design similar to the plant employed at the refinery and was operated similarly with the following exceptions:

The rich oil vent tank was operated at 5 lbs. The gasoline-oil separator in this plant was a 35 lb. lean oil stripper equipped with a refluxing rectifying section. In addition, better than 50% of the gasoline production was compression condensate which was added to the system

TABLE IV
INTERMEDIATE FLASHES
REFINERY GAS PLANT
80% PROPANE EXTRACTION

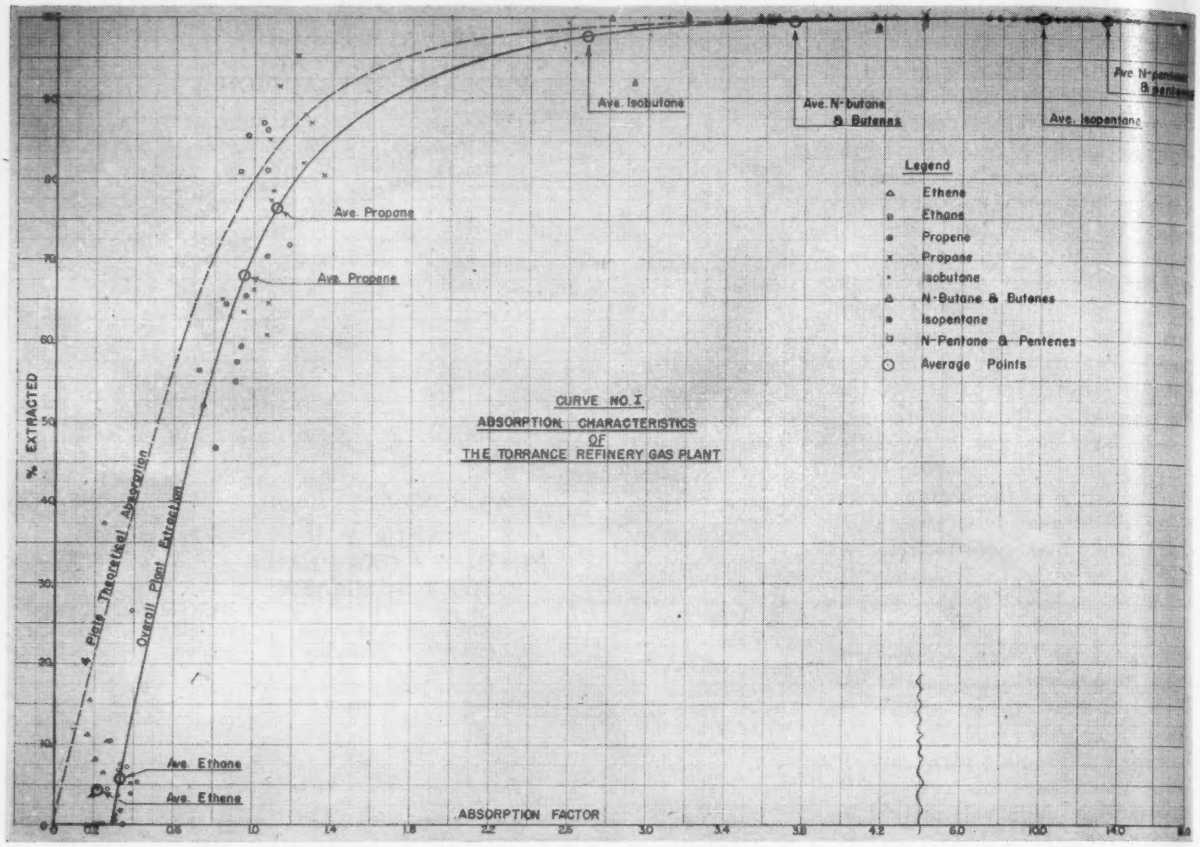
Constituent	L. P. Absorber Flash Vapors Mol. %	Rich Oil Vent Flash Vapors Mol. %	Reflux Accumulator Flash Vapors Mol. %
Hydrogen			
Nitrogen			
Methane	15.2	4.5	0.8
Ethene	4.8	4.2	1.0
Hydrogen Sulfide	4.7	4.3	3.0
Ethane	19.5	16.8	14.0
Propene	15.7	20.2	21.5
Propane	30.5	39.1	43.7
Isobutane	4.4	5.2	7.0
Butenes	2.7	2.8	4.6
N-Butane	2.2	2.3	3.8
Isopentane	0.1	0.2	0.2
Pentenes	0.1	0.2	0.2
N-Pentane	0.1	0.2	0.2
Total	100.0	100.0	100.0
Volume	790 Mcf/Day	600 Mcf/Day	900 Mcf/Day

TABLE V
REFINERY GAS PLANT
TOWER SUMMARY

	High Press. Absorber	Low Press. Absorber	Rich Oil Fractionator Rectifying Section	Rich Oil Fractionator Stripping Section
Tower Diameter	6′	5′	7′	9′-6″
Tower Height	72′	72′	83′	
Design Press.	150#	100#	150#	
No. of Trays	26	26	15	15
Tray Spacing	2′	2′	2′	2′
Type Tray	Single Cross-Flow	Single Cross-Flow	Single Cross-Flow	Double Cross-Flow
Intercooler Boots	2	2		
Downflow Area	2.7 sq. ft.	2.64 sq. ft.	4.35 sq. ft.	12.8 sq. ft.
Weir Length	47″	44″	59″	162″

TABLE VI
WET GAS & PRODUCTS
NATURAL GAS PLANT
77% PROPANE EXTRACTION

Constituent	Wet Gas Mol. %	Absorption Factor	% Extracted	Extract Liq. %	Dry Gas Mol. %
Carbon Dioxide	1.4				2.1
Methane	58.6	0.045	0.1	0.1	85.2
Ethane	7.1	0.38	6.5	1.0	9.6
Propane	9.0	1.23	77.0	17.8	3.1
Isobutane	2.8	2.98	98.8	8.0	0.04
N-Butane	5.6	4.13	100.0	16.2	
Pentanes +	15.5		100.0	56.9	
Total	100.0			100.0	100.0
Volume	3,500 Mcf/Day		38,000 Gals/Day		2,400 Mcf/Day



principally as reflux to the still.

The high propane extraction in this plant was made possible, despite the fact that the run-down accumulator was operated at only 35 lbs., principally because of the heavy nature of the gasoline extract. This 77% propane extraction showed an increase in yields of propane and heavier components of 2,600 Gals/-Day above that obtained when aiming at about 47% propane extraction.

For gasolines that lie in the range between this heavy natural gasoline and the light refinery extract, high propane extraction may be obtained by increasing the pressure on the run-down accumulator and rich oil vent tank commensurately with the volatility of the product. This increased run-down accumulator pressure may be attained either by increasing the still pressure or by an after compression of the reflux accumulator vapors.

BUY WAR BONDS

Tide Water Associated Girl Wins High Marine Honor

The first woman Judge Advocate in the long history of the United States Marine Corps took over her duties at Camp Lejeune, North Carolina, recently. She is Captain Lily S. Hutcheon who, in civilian life, was a member of the legal staff of Tide Water Associated Oil Company at their headquarters in San Francisco.

The woman legal expert graduated from the Golden Gate Law School and studied additional law at the University of San Francisco, before going into the service of her country. Commissioned on February 9, 1943, as a First Lieutenant, Lily Hutcheon was one of the first women officers selected when the Marine Corps Women's Reserve was formed.

After training at the Reserve Officers' School at Camp Lejeune, she became senior woman procurement officer for the Western Procurement Division, Marine Corps, in San Francisco. Later she was transferred to Quantico, Virginia, on the staff of the Reserve Officers' Schools.

Captain Hutcheon's present titles include Acting Judge Advocate before the General Court-Martial Board, and Legal Assistance Officer.

Capt. Lily S. Hutcheon

Death Takes S. R. Bowen

S. R. Bowen, prominently identified with the California oil industry for the past 45 years, died on Sunday, August 6, at the Murphy Memorial Hospital in Whittier, California.

Mr. Bowen first became identified with the oil business in 1900 when he took a connection with the Oil Well Supply Co. and ultimately became shop and store manager for the Oil Well Supply Co. at Coalinga.

In 1910, Sam Bowen entered business for himself. The first home of the S. R. Bowen Company was at Coalinga, Calif.

The year 1913 saw the S. R. Bowen Co. embarked on the manufacture of their own line of tools. The first tool manufactured by the Bowen Co. was the Vorman Casing Spear, following which, Mr. Bowen developed and introduced the Ball Bearing Spider, designed to suspend tubing for casing cutting operation. This device was the forerunner of the modern method for hanging tubing for such an operation. Also manufactured in the Coalinga shop was the Richard Tubing Catcher, which was handled exclusively by S. A. Guiberson, and also the old Mills Casing Tong.

At the close of 1917, Mr. Bowen sold his shop to R. C. Baker, and for several years, during which time he was in the Army, was not actively identified with the oil industry. The year 1917 also saw the change-over from the cable tool method of drilling to rotary.

After three years of inactivity, as far as the oil business was concerned, Mr. Bowen re-entered the fishing tool manufacturing business in 1921, and devoted himself to the development of rotary fishing tools. The first plant and store was located on a two-acre site which was then the center of activity for Huntington Beach. The personnel of the organization consisted of S. R. Bowen, president, bookkeeper, credit manager and full time office force; Jack Wilcox, now vice president of the organization, was the only field man; S. Siracusa was shop foreman. The rest of the organization consisted of Louis Edwards, Walt Bowen and three machinists.

One of the first acts of the organization was to set up a 24 hour service, and for this purpose several members of the organization were quartered in rooms over the plant.

The first rotary fishing tool developed by Mr. Bowen and associates was the L. & L. Releasing Spear which was credited with being the earliest releasing and pack-off tool. This was followed by a socket which reversed the spear principle, and afforded a hold and pack-off on the outside of the pipe. Following the developments of these tools, the Straight Pull Bowen Jar was developed, and brought up to its present day efficiency. These tools were followed in rapid order by the Texas Type Over-shot, and the Texas Type Inside Casing Cutter, which were designed and developed by Walter Bowen. The next major development in the tools of the Bowen Co. was the Bowen Safety Joint. During the subsequent years metallurgy and experience developed the older tools to their present high degree of efficiency to allow for the manufacture of the various fishing tools now necessary to the highly specialized art of rotary drilling. Also, during this time a complete rental service was built up for the California operators.

Mr. Bowen had not been in good health for some time prior to his death but fortunately had always believed in assigning responsibilities to his associates so that the monument which he left in the S. R. Bowen Company will continue under the very capable management of these same associates.

Mr. Bowen leaves a widow, Victoria Bowen; a son, Paul; both of Huntington Beach; a daughter, Mrs. Emily Wilcox of Whittier, and a brother, L. C. Bowen of New Jersey.

S .R. Bowen
Pioneer Oil Tool Manufacturer

P.A.W. Advances Gavin and Detwiler

Appointment of M. J. Gavin and J. G. Detwiler as assistant directors of the Foreign Refining Division of the Petroleum Administration for War was announced on July 27th by Deputy Petroleum Administrator Ralph K. Davies.

The appointees, who were promoted from within the PAW Foreign Refining Division, will assist Director C. Stribling Snodgrass.

Mr. Gavin's duties will relate to the facilities side of the division while Mr. Detwiler's primary responsibilities will relate to the operations of foreign refineries.

A veteran of 29 years in the petroleum industry, Mr. Gavin joined PAW as a foreign petroleum specialist in October 1942. He started his petroleum career as an assistant chemist for the Union Oil Company of California in August 1915. In 1918, Mr. Gavin was employed by the Bureau of Mines, Department of Interior, where he remained until 1929 when he joined the staff of the Foster Wheeler Corporation in Los Angeles. He served with that corporation as district manager until 1942.

An honor graduate of the University of California where he majored in chemistry and chemical engineering, Mr. Gavin received his B. S. in 1915 and his E. M. in petroleum in 1923.

M. J. Gavin

S. J. Dickey, president of General Petroleum Corporation, broadcasts important message to the Armed Forces regarding big increases in production of high-octane aviation gasoline, achieved by Petroleum industry as its major contribution to war.

Mr. Detwiler joined The Texas Company as a work chemist at Port Arthur, Texas, in 1911. In February 1944, he took leave from his position as supervisor of tests and specifications Refining Division, Texas Company, New York City, to join the PAW Foreign Refining Division as a petroleum technologist. Mr. Detwiler served 19 months in the Army during the last war. In 1926 he was called in as a petroleum expert by the British Oil Company to testify before the King's High Bench Court, London.

Mr. Gavin will be assisted in his work by L. M. Miller, chief of the Facilities Section, and O. G. Pratt, Chief of the Russian Section. C. Marvin Case, chief of the Operation Section, and D. S. Fraser, chief of the Technical Section, will assist Mr. Detwiler.

Mensing Advanced By National Supply Co.

The National Supply Company announces the election of John B. Mensing as Assistant Treasurer.

Mr. Mensing has been associated with National for twenty-five years, beginning in the Credit Department at Toledo, Ohio, on March 17, 1919.

Later transfers took him to Fort Worth, Texas; Independence, Kansas, and then to the head office in Pittsburgh, where he was Chief Clerk of the Pittsburgh Credit Department for ten years and later Assistant to the Treasurer.

Tide Water Associated Oil Company Executives Promoted

William F. Humphrey, President of Tide Water Associated Oil Company, has announced the appointment of H. D. Haney as Assistant Vice President, effective August 1st. Mr. Haney will continue in his capacity as Manager of Transportation.

At the same time, Gardiner Blackman was appointed Manager of Industrial Relations, of the Western Division, succeeding C. R. Brown who assumes additional responsibilities in his capacity as Assistant To The President.

Carrington King

(Continued from Page 5)

quisition of exploration and development rights in areas not now under concession, the principle of equal opportunity shall be respected by both Governments.

5. That the Government of each country and the nationals thereof shall respect all valid concession contracts and lawfully acquired rights, and shall make no effort unilaterally to interfere directly or indirectly with such contracts or rights;
6. That, subject always to the considerations mentioned in paragraph 1 of this Article, the exploration for and development of petroleum resources, the construction and operation of refineries and other facilities, and the distribution of petroleum shall not be hampered by restrictions imposed by either Government or its nationals, inconsistent with the purposes of this Agreement.

ARTICLE II

The two Governments recognize that the principles declared in Article I hereof are of general applicability and merit adherence on the part of all countries interested in the international petroleum trade of the world.

Therefore, with a view to the wider adoption and effectuation of the principles embodied in this Agreement they agree that as soon as practicable they will propose to the governments of other interested producing and consuming countries an International Petroleum Agreement which, inter alia, would establish a permanent International Petroleum Council composed of representatives of all signatory countries.

To this end the two Governments hereby pledge themselves to formulate plans for an international conference to consider the negotiations of such a multilateral Petroleum Agreement. They also pledge themselves to consult with other interested governments with a view to taking whatever action is necessary to prepare for the proposed conference.

ARTICLE III

There are, however, numerous problems of joint immediate interest to the two Governments, with respect to petroleum resources in which rights are held or may be acquired by their nationals, which must be discussed and resolved on a cooperative interim basis if the general petroleum supply situation is not to deteriorate.

With this end in view the two Governments hereby agree to establish an International Petroleum Commission to be composed of eight members, four members to be appointed immediately by each Government. This Commission, in furtherance of and in accordance with the principles stated in Article I hereof, shall consider problems of mutual interest to both Governments and their nationals, and, with a view to the equitable disposition of such problems, shall be charged with the following duties and responsibilities:

1. To prepare long-term estimates of world demand for petroleum, having due regard for the interests of consuming countries and expanding consumption requirements;
2. To suggest the manner in which, over the long term, this estimated demand may best be satisfied by production equitably distributed among the various producing countries in accordance with the criteria, enumerated in paragraph 3 of the Introductory Article;
3. To recommend to both Governments broad policies for adoption by operating companies with a view to effectuating programs suggested under the provisions of paragraph 2 of this Article;
4. To analyze such short-term problems of joint interest as may arise in connection with production, processing, transportation and distribution of petroleum on a world-wide basis, wherever the nationals of either country have a significant interest, and to recommend to both Governments such action as may appear appropriate;
5. To make regular reports to the two Governments concerning its activities;
6. To make, from time to time, such additional reports and recommendations to the two Governments as may be appropriate to carry out the purposes of this Agreement.

The Commission shall establish such organization as is necessary to carry out its functions under this Agreement. The expenses of the Commission shall be shared equally by the two Governments.

ARTICLE IV

To effectuate this Agreement the two Governments hereby grant reciprocal assurances:

1. That they will adhere to the principles set forth in Article I, paragraphs 1 to 6 inclusive;
2. That they will endeavor to obtain the collaboration of the governments of other producing and consuming countries in the implementation of the principles set forth in Article I, and will consult, as appropriate, with such governments in connection with activities undertaken under Article III;
3. That upon approval of the recommendations of the Commission they will endeavor, in accordance with their respective constitutional procedures, to give effect to such approved recommendations;
4. That each Government will undertake to keep itself adequately informed of the current and prospective activities of its nationals with respect to the development, processing, transportation and distribution of petroleum;
5. That each Government will make available to the Commission such information regarding the activities of its nationals as is necessary to the realization of the purposes of this Agreement.

ARTICLE V

The two Governments agree that in this Agreement:

1. The words "country" or "territories"
   (a) in relation to the Government of the United Kingdom of Great Britain and Northern Ireland, include, in addition to the United Kingdom, all British colonies, overseas territories, protectorates, protected states and all mandated

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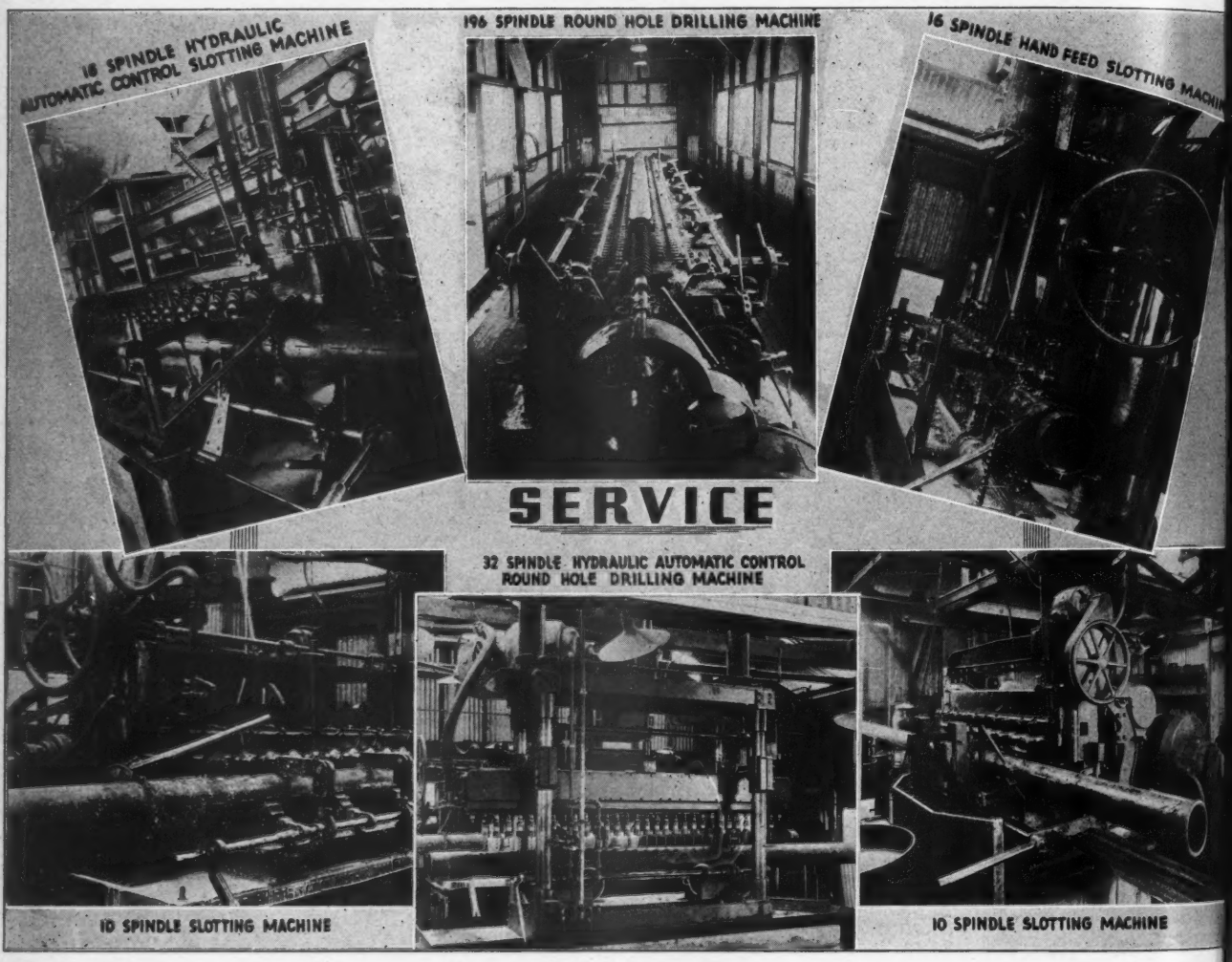
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territories administered by that Government; and

(b) in relation to the Government of the United Sates of America, include, in addition to the United States, all territory under the jurisdiction of the United States;

2. The word "nationals" means

(a) in relation to the Government of the United Kingdom of Great Britain and Northern Ireland, all British subjects and British protected persons belonging to the territories referred to in 1 (a) above and all companies incorporated under the laws of any of the above-mentioned territories, and also companies incorporated elsewhere in which the controlling interest is held by any of such nationals;

(b) in relation to the Government of the United States of America, all nationals of the United States including companies incorporated under the laws of the territories referred to in 1 (b) above, and also companies incorporated elsewhere in which the controlling interest is held by any of such nationals;

3. The word "petroleum" means crude petroleum and its derivatives.

ARTICLE VI

This Agreement shall enter into force upon a date to be agreed upon after each Government shall have notified the other of its readiness to bring the Agreement into force and shall continue in force until three months after notice of termination has been given by either Government or until it is superseded by the International Petroleum Agreement contemplated in Article II.

In witness whereof the undersigned, duly authorized thereto, have signed this Agreement.

Done in Washington, in duplicate, this eighth day of August, one thousand nine hundred and forty-four.

FOR THE GOVERNMENT OF THE UNITED STATES OF AMERICA:
EDWARD R. STETTINIUS, JR.,
Acting Secretary of State of the United States of America
FOR THE GOVERNMENT OF THE UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND:
BEAVERBROOK,
Lord Privy Seal

BUY WAR BONDS

Shield Abandons Inglewood Outpost

On the southwest flank of the Inglewood field, the Shield Pet. Co. well No. 1, has been abandoned. Located in section 18-2s-14w, the hole was bottomed in steeply dipping shale with streaks of gray sand at the depth of 3608 ft. The hole is reported to have been running very low structurally and the operator has tentative plans made to directionally redrill to a more favorable position.

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Field Development

Los Angeles Basin

Outpost Spudded

In the recently discovered westerly extension of the East Coyote field, the Barnsdall Oil Co. has spudded in on Sunny Hills Ranch No. 2. Located approximately 1000 ft. southeasterly from the discovery well, the hole is currently drilling ahead below 4000 ft. When last reported the discovery well S.H.R. No. 1 was pumping 60 barrels per day of 24 gravity clean oil from the plugged depth of 6360 ft.

Shell Completes Dominguez Well

Near the apex of the structure in the Dominguez field, the Shell Oil Co. completed Reyes No. 133, for an initial production of 1250 barrels per day of 30 gravity clean oil with a gross cut of 33 percent. Flowing through a 40/64 inch bean with tubing pressure heading from 250 to 500 pounds and a casing pressure of 1600 pounds. Cored to a depth of 6280 ft., the well has seven inch casing cemented over the Fifth Callender zone at 5350 ft. and a 5½ inch liner, with perforations open in both the Fifth and Sixth zones, landed at 6275 ft. With the bean reduced to 27/64 inch, the well is currently flowing 775 barrels per day of net oil showing a gross cut of 27 per cent. Northeast from this well, the operator is preparing to spud in on Reyes No. 134.

Torrance Outpost

On the northerly flank of the Torrance field, the D. D. Dunlap Trust No. Two has the rig erected for Redondo No. 1. Located 186 ft. north and 395 ft. west from the centerline intersection of Speyer Lane and Rindge Lane, the well will look for a possible structure north of and parallel to the Torrance field. The well is located approximately 1000 ft. northwest of the Dumm Brothers well which was drilled last year and failed to make a commercial producer, due to a mechanical failure in the hole.

Imperial "Cat" Abandoned

In the Salton Sea area of Imperial county, O'Quinn and Hadley All-American Acres No. 1, has been abandoned. Located on the east side of the Salton Sea, in section 11-9s-12e, the hole was bottomed in siltstone at the total depth of 1450 ft. There were no showings of either oil or gas found.

Outpost Abandoned

The General Exploration Co. of Calif. outpost well northwest of the Long Beach field has been abandoned. Dominguez No. 2, found only gray sand in the objective zone and was abandoned at the depth of 7780 ft.

Seal Beach Completion

Northeast of the fault on the easterly flank of the Seal Beach field, the Shell Oil Co. has completed Bryant No. 5. Producing from the McGrath zone, the well tanked 1544

LOS ANGELES BASIN WILDCATS

Area	Well	No.	Section	Depth	Status
Athens	J. Paul Getty, Westmore	1	2, 3-14	9109	Prep. rig pump
Aliso Canyon	Standard Oil Co., Del Aliso	1	29, 3-16	4238	Drilling
	Standard Oil Co., Ward	3-1	27, 3-16	3228	Drilling
Bandini	Hathaway Co., Rossi	1	22, 2-12	2795	Drilling
Castaic	Charter Oil Co., Well	1	18, 5-16		Grading roads
El Segundo	Pauley, H. R. & E. W., Loftus	1	11, 3-15	7356	Pumping
	Richfield Oil Corp., Lenzinger	1	8, 3-14		Foundation
Hasley Canyon	Shell Oil Co., Claiborne	88-4	4, 4-17	4673	Drilling
Las Llajas	Standard Oil Co., Brady Est.	2-1		2404	Drilling
Newhall	British-Am. & The Texas Co., NLF	1	21, 4-17		Rigging up
Pico Canyon	Standard Oil Co., Pico Co.	42	1, 3-17	551	Drilling
Puente	Alleghany Pet. Co., Rowland	1	14, 2-10	755	Drilling
	Hacienda Oil Co., Well	1	27, 2-10		Location
	Hansen, Melvin, Corehole	3	24, 2-10	1900	Swabbing
Turnbull Canyon	Capital Co., Cole	2-2	11, 2-11	1807	Running liner
	Capital Co., Cole	3-1	11, 2s-11w	3386	Abandoning
Whittier	Mayo Oil Co., Grey	1	17, 2-11	3166	Drilling
	Orange County				
Bolsa Chica	Standard Oil Co., Lomita-Sunset	1	29, 5-11	3612	Drilling
Brea Canyon	Selbar Oil Co., Wardman-Comm.	1	3, 3-10		Location
Buena Park	Gen. Pet. Corp., Heath	1	34, 3-11	11422	Swabbing
E. Coyote	Barnsdall Oil Co., Sunny Hills	2	22, 3-10	4397	Drilling
Olive	Richfield Oil Corp., Hamrick-Olive	1	8, 4-9		Foundation
	San Bernardino County				
Chino Hills	Chino Hills Oil Co., Kraemer	1	33, 3-28	2270	Idle
Hesperia	Salter, Lee, Well	1	34, 4-5	2157	Drilling
Chino Area	Wm. Y. Lee, Corehole	2	21, 2-8	3010	Idle
	San Diego County				
Waterman Cyn.	La Jolla Pet. Co., Well	1	32, 15-3		Prep. to spud
	Imperial County				
Salton Sea	O'Quinn & Hadley, All Am. Acres Comm.	1	11, 9-12	1450	Abandoned

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barrels of clean 30 gravity oil during the first 24 hours. The flow was made through a ½ inch bean with 635 pounds tubing pressure and 1000 pounds casing pressure. The bean was opened up to a 64/64 inch and the well flowed for two hours at the rate of 3460 barrels per day with 260 pounds tubing pressure and 1000 pounds casing pressure and a gas rate of 1,735 MCF. Located 650 ft. south and 960 ft. east from the north ¼ corner of section 11-5s-12w, the hole was bottomed in shale and oil sand at the depth of 7848 ft. A string of seven inch casing was cemented over the McGrath zone at 6860 ft. and a 5½ inch liner, including 841 ft. perforated landed at 7843 ft. A glance at the other wells drilling in the field finds the Hellman Estate well No. 8, sidetracking approximately 100 ft. of drill pipe fish at 7800 ft. The Standard Oil Co. San Gabriel No. 29, is spot coring ahead below 4000 ft. Several shallow gas and oil sands have been cored and tested in this well, while the Tide Water Asso. Oil Co. is drilling Bryant No. 2-23 below 3200 ft. On the westerly flank of the field the Capital Co. well No. 19-1, is drilling below 2400 ft.

Charter Stakes Castaic "Cat"

In the Castaic area of Los Angeles county, the Charter Oil Co. is grading roads and location for well No. 1. Located 300 ft. north and 300 ft. west from the east quarter of section 18-5n-16w, the operator will look for the oil sand found, but never commercially produced, in nearby well to the southwest.

West American Makes Fast Hole

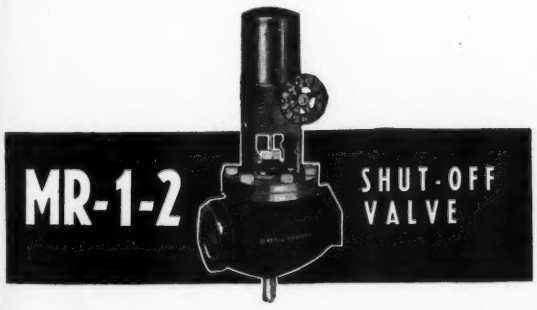
In the northerly portion of the Huntington Beach field, southwest from the intersection of Magnolia and Westminster, the West American Oil Co. has made remarkably fast time in drilling Ashton No. 12. With a total elapsed time of eleven days, the drillers made 4800 ft. of hole and cemented a string of seven inch casing on bottom. The operator is now preparing to gun perforate the Lower Ashton zone and place the well on production.

General Pet. Testing Heath

Approximately one mile northwest of the town of Buena Park, the General Pet. Corp. Heath No. 1, is being swabbed for production. Located near the northeast corner of section 34-3s-11w, the hole was bottomed in volcanics at the total depth of 11,422 ft. and plugged back to 11,200 ft. A string of 5½ inch casing was cemented over the top of the oil showings at 11,000 ft. and the well cleaned out to the top of the plug to make an open hole production test. After swabbing continuously for three days the well is showing only fresh water with the fluid level standing at 2300 ft.

Mayo Drilling Whittier Test

On the southerly flank of the old West Whittier field, the Mayo Oil Co. is drilling Grey No. 1. Located northeast from the center of section 17-2s-11w, the hole is currently drilling in tough shale below 3100 ft. The operator plans to drill in approximately 5000 ft. for a test of the Whittier sands.



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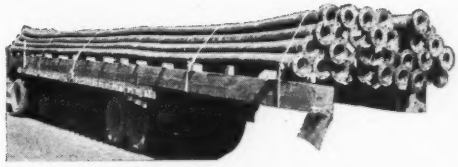

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San Joaquin Valley

Shell Stakes Canfield "Cat"

Northeast of the Canfield Ranch field, where the Standard Oil Co. developed a small amount of production several years ago, the Shell Oil Co. has staked location for KCL-B No. 45-27. Located 2334 ft. north and 2313 ft. east from the southwest corner of section 27-30s-26e, the well will test the Stevens sand and may drill to the Vedder zone. The company reports that operations will not start for about two months.

Amerada Drilling Helm Outpost

Near the producing area being developed southeast of the Helm field, the Amerada Pet. Corp. is drilling California Lands No. 76-15. Located near the east ¼ corner of section 15-17s-18e, the well is currently drilling ahead below 3500 ft. Objective of the test is the Eocene sands found in nearby wells at the depth of approximately 8200 ft.

Mc Van Test Abandoned

Northeast from the town of Famosa, B. C. Morrison well No. 1, has been abandoned. Located in section 4-27s-27e, the hole was bottomed in basement rocks at the depth of 5205 ft. after finding only gray sand in both the Vedder and Eocene sands, the tops of which were found at 3555 ft. and 4555 ft. respectively. The operator has no further plans contemplated for the area at the present time.

Richfield Stakes Cottonwood "Cat"

In the Cottonwood area of Kern county, approximately 12 miles east of the town of Bakersfield, the Richfield Oil Corp. has announced location for Cottonwood-Olcese No. 1. Located 1650 ft. north and 2285 ft. east from the southwest corner of section 20-29s-30e, the well will test both the Santa Margarita and Temblor sands which in this area should be found above 2000 ft.

Edison Field Completion

On section 14-30s-29e, in the Edison field, H. H. Magee, Operator, completed Brown No. 1, pumping an initial rate of 275 barrels per day of 17 gravity oil cutting five per cent. Drilled and cored to a depth of 1619 ft. the well found the top of the first Edison sand at 1290 ft. and the top of the Duff oil sand at 1447 ft. The mechanical condition of the hole consists of a string of seven inch casing cemented at 1313 ft. and a 5½ inch liner including 307 ft. perforated landed at 1619 ft.

Deep Test Finds Basement

Standard Oil Co. KCL No. 11-44, deep test well in the Greeley field, has been bottomed in basement rocks at the total depth of 13,469 ft. Located on the westerly flank of the field, in section 18-29s-26e, the well found the top of the Rio Bravo oil sand at 11,358 ft., top of the Vedder sand at 11,398 ft. top of the Eocene sand at 13,355 ft. and the top of the basement (Serpentine) rocks at 13,465 ft. The hole is now being reamed preparatory to running a blank liner.

SAN JOAQUIN VALLEY WILDCATS

Area	Well	No.	Section	Depth	Status
Fresno County					
Burrel	General Pet. Corp., Cryan	1-32	32, 16-19		Prep. to spud
Cantua	Seaboard-Pure Oil Co., Well	54-22	22, 16-13	6025	Drilling
Jacalitos	The Texas Co., Hawxhurst	1-6	6, 22-16		Grading
NW Raisin City	Seaboard Oil Co., Seaboard-Pure	54-22	5, 15-17		Grade
San Joaquin	Superior Oil Co., Brackney	68-30	30, 15-17	7500	Drilling
S. E. Helm	Amerada Pet. Corp., Calif. Lands	76-15	15, 17-18	3070	Drilling
Tranquility	Standard Oil Co., Patterson	74	3, 16-14		Location
	The Texas Co., Calif.-Cotton	36-23	23, 16-15		Location
Kern County					
Ant Hill	Amerada Pet. Corp.,Ant Hill,S.P.	35-15	15, 29-29		Grade
Arvin	Continental Oil Co., Derby	1	35, 31-29	8445	Drilling
Canfield Ranch	Shell Oil Co., Inc., KCL-B	45-27	27, 30-26		Location
Devils Den	C.C.M.O. Co., Bates	2	20, 25-19	1715	Drilling
	Hillview Oil Co., Well	1	11, 25-18	208	Idle
E. Edison	Richfield Oil Corp., Cottonwood-Olcese	1	20, 29-30		Location
Fruitvale	General Pet. Corp., KCL	76-29	29, 29-27		Prep. to spud
Gosford	T. W. A. Oil Co., KCL	44-22	22, 30-26	8152	Pumping
	T. W. A. Oil Co., KCL	66-22	22, 30-26	3410	Drilling
McKittrick	Americal Pet. Corp., Americal	1	2, 30-31	5450	Prep. to test
	MacDonald-Burns & Norris, Flickinger	1	36, 30-22	1416	Drilling
	Standard Oil Co., McPhee	2-1	36, 29-21	2525	Drilling
Lost Hills	Standard Oil Co., Cahn	58-4	4, 27-21		Foundation
McClung	Continental Oil Co., KCL-G	2	4, 30-26		Moving in equip.
McVan	Butler Bros., Well	2	14, 27-27		Prep. to spud
	Hall, E. B. & Co., Hunt	1	28, 27-27	1656	Drilling
	Morrison, B. C., Well	1	4, 27-27	5205	Abandoned
Mt. Poso	Barnsdall Oil Co., Fitzhugh	1	32, 27-28	1290	Drilling
Poso Creek	Independent Expl. Co., Conoco	43	33, 27-27	2360	Completing
Premier	Marion, J. H. Austin	1	28, 28-27	2996	Abandoned
Round Mt.	Barnsdall Oil Co., Barlow	1	24, 28-28		Grade
	U. S. Drilling Co., S. P.	3	23, 28-28	2713	Abandoned
Semitropic	Standard Oil Co., Fullerton	1	25, 27-23	11492	Drilling
Shafter	T.W.A. Oil Co., Shafter Comm.	86A-7	7, 28-25	11990	Drilling
So. Belridge	Bandini Pet. Co., Bacon	1	27, 28-20	7922	Drilling
Strand	Standard Oil Co., Robbins	45-35	35, 29-26	8600	Drilling
	Standard Oil Co., Borland-Olney	67-35	35, 29-26	3296	Drilling
	Standard Oil Co., Brittain	61-2	2, 30-26	7360	Drilling
	Superior Oil Co., Houghton	56-35	35, 29-26	8250	Testing
Stockdale	W.G.O. Co., KCL	77-5	5, 30-27	10212	Drilling
Sunset	T. W. A. Co., McBean	86-36	36, 12-23	4680	Drilling
Tejon	Reserve Oil and Gas Co., Well	33-7	33, 11-19	177	Drilling
	Richfield Oil Corp., S. P. 10	15-15	15, 11-19	5135	Drilling
Trico	Magee, H. H., Opr., Amal-Happold	2	15, 25-24	6661	Drilling
Kings County					
Alpaugh	Standard Oil Co., Cutter	1	29, 23-22	3140	Drilling
Pyramid Hills	Pyramid Prod. Co., Spreckles	1	16, 24-18	4201	Prep. to resume
	Standard Oil Co., Well	1-6	21, 24-18	789	Drilling
Madera County					
Gill Ranch	The Texas Co., Gill	525-17	17, 13-16		Location
San Luis Obispo County					
Midway	C.C.M.O. Co., Well	G-3	2, 32-22	15	Drilling
	Richfield Oil Corp., Temblor Hills	1-1	36, 31-21	4382	Drilling

Adkisson Completes 33-B Zone Producer

W. L. Adkisson Gralan No. 7R, was completed from the 33-B sand for an initial production of 748 barrels per day of 29 gravity clean oil, flowing through a 32/64 inch bean with 400 pounds tubing pressure. Located near the north ¼ corner of section 4-32s-23e, the hole was bottomed at the total depth of 4226 ft. after finding the top of the 33B sand at 4187 ft. A string of 8⅝ inch casing was cemented at 4177 ft. and a 6⅝ inch liner, including 38 ft. perforated landed at 4224 ft. With the bean reduced to a 10/64 inch, the well is currently flowing 450 barrels of oil per day with 160 MCF of gas. One location east from this well, the operator is preparing to spud in Gralan No. 8R.

Deep Test Continues

The deep test well of the Standard Oil Co. drilling between the South Coles Levee field and the Elk Hills field continues in shale below 14,810 ft. The well, KCL No. 20-13, is now less than 200 ft. short of Continental Oil Co's. KCL No. A-2, record holding well in the Wasco field, which for several years has held the state record for depth, 15,004 ft. The Standard has released no information on the hole other than the depth.

Shell Stakes Second Test

Midway between the towns of Brentwood and Antioch, the Shell Oil Co. is preparing to drill Jacuzzi No. 1. Located 500 ft. north and 500 ft. east from the southwest corner of section 34-2n-2e, the well will look for the Eocene sand which was absent in the operators first test of the area Heidora No. 1. The Heidora well was drilled to the depth of 4048 ft. and abandoned after a formation test of gas showings near bottom recovered only salt water with minor showings of gas.

Producer Assured

Approximately one mile east from the known producing limits of the Premier field, the Independent Exploration Co. Conoco No. 43, seems certain of being a pumping well. Located near the northwest corner of section 33-27s-27e, the hole was bottomed in hard gray sandstone at the depth of 2360 ft. after finding the top of the oil sand at 2270 ft. A string of 8⅝ inch casing with 81 ft. perforated on bottom was landed at 2360 ft. and cemented through perforations at 2269 ft. The well was bailed for several days with oil standing in the hole at 400 ft. against steady bailing. Tubing is now being run preparatory to placing the well on production.

Deep Test Fishing

The Shell Oil Co. Alamitos No. 48, deep test well in the Long Beach field, is fishing for drill pipe which froze at 2500 ft. Circulation was lost while the hole was being drilled at 5678 ft. The crew attempted to remove the drill pipe from the hole but were unable to pull the bit above 2500 ft. Fsihing operations are now in progress with the top of the fish at 600 ft.

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Outpost in Shale

Standard Oil Co. Bowman No. 2-1, outpost well south of the Holser Canyon field, is coring ahead below 7600 ft. Now in vertically dipping Miocene shale, the core recovery in the past 5000 ft. of hole has shown dips from 70 to 90 degrees.

Whittier Assoc. Drilling Ahead

The Whittier Associates Barham No. 2 is drilling and taking spot cores below 3300 ft. A production test was made of Miocene oil showings between the depths of 2363 ft. and 2724 ft. On the pump, the well averaged 24 barrels per day of mud water and oil. The liner was pulled and the hole drilled ahead. Core recovery since the deepening operations were started has consisted of shale with thin streaks of Chert showing oil.

Texaco Completes Shiells Canyon Outpost

On the northwesterly flank of the Shiells Canyon field, the Texas Co. has completed W.P.H. No. 2. Located in section 5-3n-19w, the hole was drilled and cored to the total depth of 3019 ft. A string of 6⅝ inch casing was cemented at 2455 ft. and a five inch liner, including 523 ft. perforated, landed at 3015 ft. On the pump, the well is producing at the rate of 188 barrels per day of 30 gravity oil cutting less than one per cent. East of this well the operator is currently drilling Shiells No. 150, below 1000 ft.

Santa Maria Activity

The current drilling boom in the Santa Maria Valley field continues at an even steady pace. The Bel-Air Oil Co. is drilling Tonascia No. 2, on section 22-10n-34w, at 3650 ft. and on section 35 are redrilling Twitchell No. 5, from 1680 ft. The Bush Hancock Oil Co. is swabbing for completion of Bradley No. 11, on section 26-10n-34w, and in section 25 are rigging up on Brown No. 8. Wiley No. 7, in this same section is being rigged for completion from the depth of 5208 ft. W. R. Gerard on section 22, is placing Acquistapace No. 5, on the pump from the depth of 4744 ft. A. N. Macrate is rigging up Fernandez No. 11, on section 36, and the Macson Oil Co. has the rig built on section 21, for Moretti No. 1. The Signal Oil and Gas Co. is preparing to place Libeu 3, on the pump in section 26. The Union Oil Co. is currently running four strings of tools in the field. These are now on Adam No. 5, Bradley Lands No. 3-1, F. Vicente No. 10, and F. Vicente No. 11.

Shell Stakes Solano "Cat"

In the Kirby Hills area of Solano county, the Shell Oil Co. is rigging up preparatory to spuddding Lambie No. 1. The location of this deep test well is 402 ft. north and 5714 ft. west from the east quarter corner of section 30-4n-1e, which places the well in section 25-4n-1w.

South of this well in the Suisun Bay area, the Standard Oil Co. is running two strings of tools. In section 5-3n-1w, Suisun Comm. No. 3, is coring ahead in shale below 5000 ft. While to the southeast, near the east quarter corner of the same section, location is being prepared for Suisun Comm. No. 4. Still farther to the southeast, in section 23-3n-1w, Fontana Farms No. 1, is coring in sand and shale below 7300 ft. While on section 32-4n-1w, Fontana Farms No. 2, is rigging up.

Rio Vista Completions

The Rio Vista gas field is currently going through one of the largest booms in the history of the field. The Standard Oil Co. is running four strings of tools, the Amerada Pet. Corp. three strings, and the Texas Co. one string. The Standard Oil Co. recently opened up to development, a new deeper gas sand in Perry Anderson No. H-6. Located in section 36-4n-2e, the hole was bot-

COASTAL COUNTIES WILDCATS

Area	Well	No.	Section	Depth	Status
	Santa Barbara County				
Cat Canyon	Richfield Oil Corp., Los Flores	1	10, 8-33	6676	Fishing D.P.
	Union Oil Co., McNee, C. H.	3	20, 9-32	2750	Drilling
	Union Oil Co., McCroskey, C. H.	1	20, 9-32	4600	Pumping
	Union Oil Co., Santa Maria Realty	1	10, 9-33		Foundation
Gaviota	Standard Oil Co., Hollister	1	35, 5-33		Rig
Lompoc	S. R. Williams, Fickert	1	8, 7-33	3446	Idle
Los Alamos	J. I. Anderson & So. Calif. Pet. Corp., Archambeault	2	3, 7-32	4030	Drilling
Los Olivos	Hub Oil Co., La Laguna	1	7, 7-30	3580	Prep. to deep.
Purisima	Whittier Assoc., Barham	2	11, 7-32	3274	Drilling
	Ventura County				
Eureka Canyon	El Rika Oil Co., Well	7	33, 4-18		Location
Ex-Mission	Union Oil Co., Adams	41	19, 4-21	985	Drilling
Happy Camp	Cal-Camp Oil Corp., Harrington	1	21, 3-19		Grade roads
Piru	Delroy Pet. Corp., Lisk	3	22, 5-18	3149	Idle
	Standard Oil Co., Bowman	2-1	14, 4-18	7618	Drilling
Sespe	Assoc. Pip. & Eng. Co., A.P.&E. Co.	1	5, 5-19		Moving in equip.
	Volunteer Pet. Co., Tar Creek	3	28, 5-19	2345	Drilling
	Merchants Pet. Co., Well	9	1, 4-20		Rig
South Mt.	Pac. West. O. Corp., Yale	1	13, 3-21	736	Drilling
	Wilshire Oil Co., Petit	2	16, 3-20		Rig
Timber Canyon	Hickey, Noble J. Temple	1	22, 4-21	656	Idle
	San Luis Obispo County				
Arroyo Grande	McDuffie, Wm. C. Adams	1	31, 31-13	2250	Drilling

NORTHERN COUNTIES WILDCATS

County	Well	No.	Section	Depth	Status
Butte	Richfield Oil Corp., Hamilton-Nord	1	9, 22n-1w	1918	Drilling
Colusa	Standard Oil Co., Princeton	1	24, 18n-2w	5198	Fishing D.P.
	Union & Gen. Pet. Corp., Capital	2	27, 16n-1w	2600	Abandoned
Contra Costa	Shell Oil Co., Inc., Jacuzzi	1	34, 2n-2e		Location
Sacramento	Amerada Pet. Corp., Capital Co.	2	2, 6n-2e	3333	Completed
San Benito	Panoche Pet. Co., Panoche	1	24, 16s-10e	804	Drilling
San Mateo	Richfield Oil Corp., Lena Souza	1	13, 7s-5w	9451	Drilling
Solano	Shell Oil Co., Inc., Lambie	1	25, 4n-1w		Rigging up
	Standard Oil Co., Suisun	3	5, 3n-1w	4603	Drilling
	Standard Oil Co., Fontana	1	23, 3n-1w	7302	Drilling
Tehama	Superior Oil Co., Saldubehere	1	12, 24s-3w	6988	Fishing D.P.
	The Texas Co., Jelly-Bend	18-8	8, 29n-2w	610	Drilling

tomed in shale at the depth of 5856 ft. A string of 5½ inch casing was cemented on bottom and gun perforated between the depths of 5735 ft. and 5795 ft. On test, the well produced dry gas at the rate of 16,704 MCF per day through a ⅝ inch bean with 2140 pounds tubing pressure and 2034 pounds casing pressure. The well is now standing shut in with the pressures equalized at 2217 pounds. South of this well, in section 3-3n-3e, the Standard Oil Co. completed Andrus Island Unit No. M-4, for an initial rate of 14,192 MCF per day of dry gas blowing through a ⅝ inch bean with 1766 pounds tubing pressure and 1654 pounds casing pressure. The well is producing from the Midland sand between the depths of 4500 ft. and 4573 ft.

Outpost Coring

South of the Bardsdale field, in section 7-3n-19w, the Wilshire Oil Co. C. E. Dryden No. 1, is coring ahead in shale below 2100 ft. Several hundred feet of good looking Sespe oil sand is reported to have been found below 1200 ft. with a test having been made of a solid 100 ft. of sand near bottom. The test was a failure, however, due to the tool sticking in the hole.

Anderson in Miocene

In the Los Alamos area of Santa Barbara county, J. I. Anderson Archambeault No. 2, is drilling ahead in shale below 4100 ft. The top of the Miocene formation was found at 3850 ft. and a core taken at 3900 ft. recovered fractured shale with heavy oil showing in the breaks.

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Superior Testing Raisin City "Cat"

Approximately four miles southeast of the Raisin City field, the Superior Oil Co. R. S. Brackney No. 68-30 is coring ahead below 7900 ft. after making a formation test of the Domengine sand. Located in section 30-15s-17e, the well found the top of the Kreyenhagen at 6610 ft. and the top of the Wheatville (Domengine) sand at 6993 ft. The formation test made of the interval 6990 ft. to 7010 ft. recovered 950 ft. of clean 28 gravity oil and 270 ft. of mud with the tester having been open for 1½ hours. The hole is now drilling in Cretaceous gray sand and shale the top of which has been tentatively placed at 7450 ft.

"Y" Zone Test at North Belridge

In the North Belridge field, on section 1-28s-20e, the Belridge Oil Co. is making a production test of the deep "Y" zone in well No. 7-27. Located near the center of the section at the extreme south end of the field the well was deepened from the old producing depth of 8466 ft. to 9005 ft. where the hole was bottomed in shale after finding the top of the "Y" zone at 8910 ft. A 6⅝ inch blank liner was cemented at 8898 ft. and a 4¾ inch perforated liner landed on bottom at 9005 ft. There is no information available as yet on the yield from the well.

Shell Oil Corp. Core Hole "A" Rogers Piru Creek. Sec. 22, 5-18. 5/24/44. Dana Detrick, Shell Pet. Engr.; George Kuffel, "micropaleant"; Otis Meants, Drlg. and Prod. Co. Supt.; H. A. Bardeen, interested in lease; Jan Schoo, Shell geologist; Paul Pustmueller, Shell geologist.

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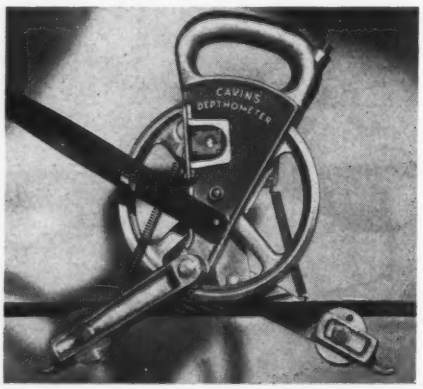

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New Drilling Company Organized

An announcement of the formation of the JENWOOD DRILLING COMPANY will be of interest to California operators.

This drilling company will be headed by Charles H. Jennings. John A. Woodward, President of the St. Anthony Oil Corporation, is to be a director and advisor of the new company.

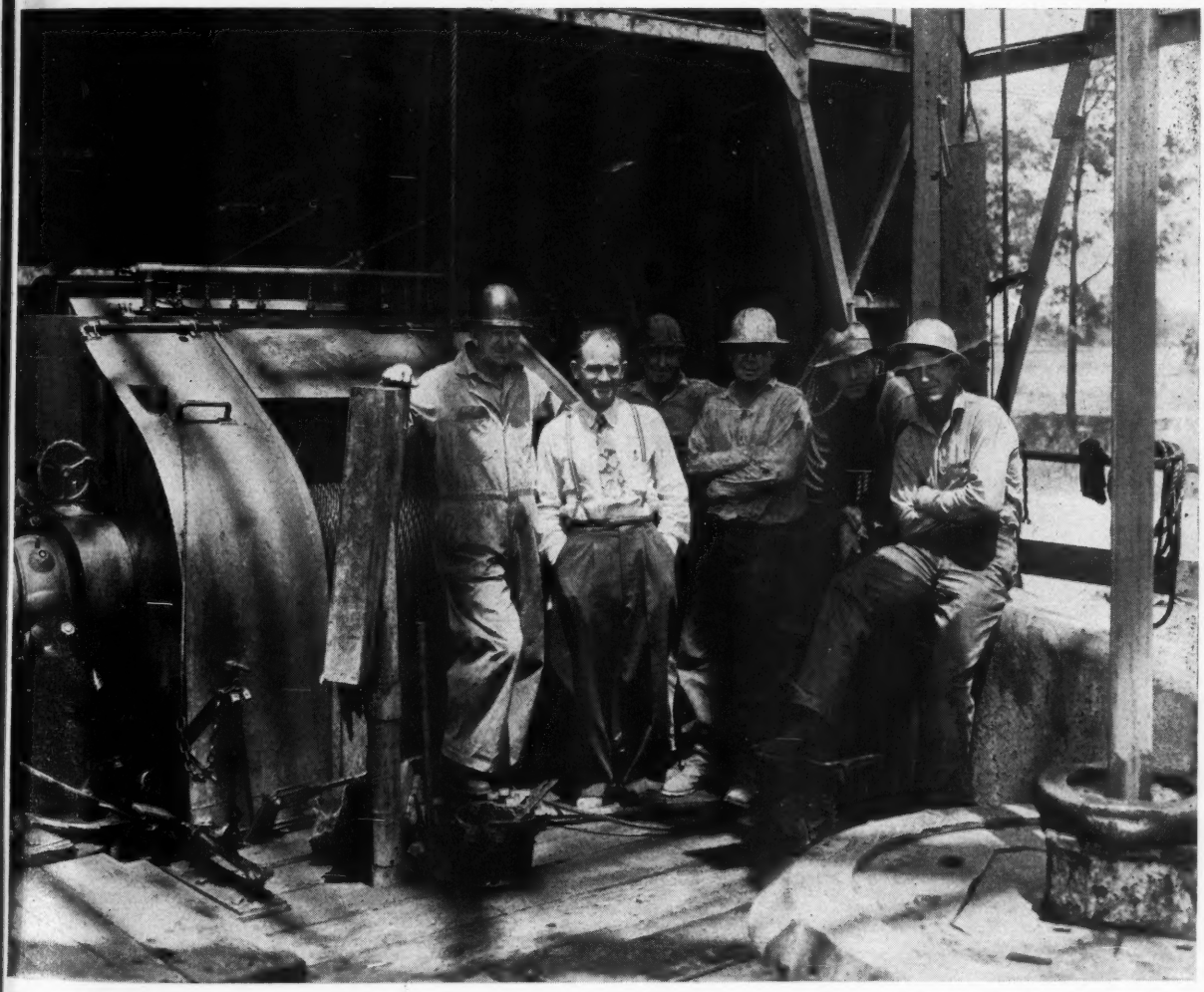
Charles (Bus) Jennings is an old timer in the oil business, in point of service. "Bus" graduated from UCLA with a degree in geology but even prior to his graduation he worked for his father, F. W. Jennings, who was one of the pioneers of the California Oil Industry. Mr. Jennings, Sr., was drilling for the Doheny interests back in 1906. He afterwards became drilling superintendent for the Shell Oil Company.

Charles Jennings

"Bus" Jennings started his oil experience with the Shell Oil Company in the Coalinga field in 1915 and has worked as driller for several companies. At one time he served with the Standard Oil Company of New Jersey in Rumania. "Bus" was also a specialist on the staff of the Baker Oil Tools, Inc., handling the introduction of many of Baker Cement Tools.

At the present time the Jenwood Drilling Company is redrilling the St. Anthony Oil Corporation's Gordon No. 2 Well. They expect to complete this well in the 8th O'Dea zone.

Jenwood Drilling Company's address is P.O. Box 877, Station H, Los Angeles or phone TWinoaks 1106.



A part of the crew of the Jenwood Drilling Company pictured at the Gordon No. 2 Well of St. Anthony Oil Corporation. Left to right: R. W. Nelson, driller; Charles H. Jennings, Pres.; G. W. Bobbitt, R. A. Phipps, D. W. Peterson and C. E. Moore.

U. S. Department of the Interior, General Land Office, Washington, D. C. Notice is hereby given that the E½SE¼, sec. 2, T. 21 S., R. 14 E., M.D.M., 80 acres, in the Coalinga West Side oil field, California, is offered to the responsible, qualified bidder of the highest cash bonus per acre for lease under section 17 of the mineral leasing act as amended by the act of August 21, 1935, (49 Stat. 674, 30 U.S.C. sec. 226). The minimum bid which will be accepted is $1.00 per acre. Sealed bids will be received in the office of the Commissioner of the General Land Office, Interior Building, Washington 25, D. C. up to 12 noon, September 11, 1944. Each bidder must submit a certified check or cash for one-fifth of the amount bid, payable to the order of the Treasurer of the United States and file the showing of qualifications to receive a lease required under section 7 of Circular 1386. The remainder of the bonus bid and the annual rental at the rate of $1.00 per acre must be paid and a $5,000 corporate surety bond must be furnished by the successful bidder prior to the issuance of the lease. The deposits of the other bidders will be returned. The envelopes should be plainly marked "Bid for lease in Coalinga West Side oil field. Not to be opened before noon, September 11, 1944." No bids received after the time fixed herein for submitting bids will be considered. Bidders are warned against violation of section 59, U. S. Criminal Code, approved March 4, 1909, prohibiting, unlawful combination or intimidation of bidders. The right is reserved to reject any and all bids in the discretion of the Secretary of the Interior. Fred W. Johnson, Commissioner.

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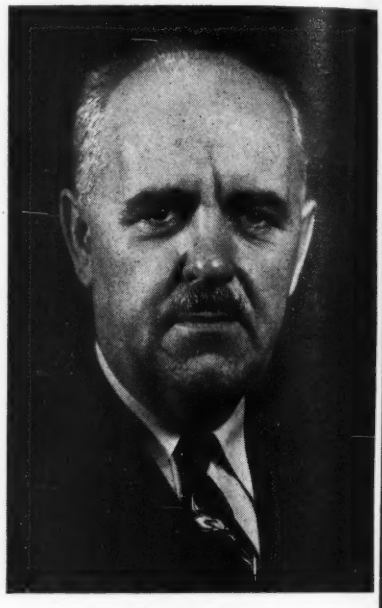
Atkins Leaves Chiksan

Terminating an association of nearly 15 years, Earle R. Atkins has resigned as Vice President and Sales Manager of Chiksan Tool Co., Brea, California. During the period in which Mr. Atkins directed Chiksan sales, the company's annual volume has grown from $250,000 to over $2,500,000. From a sales force of two men, covering Southern California, Mr. Atkins developed a selling organization of 40, with representatives in principal cities throughout the United States. In addition, a permanent branch was established in New York City and distribution was arranged through leading jobbers of industrial equipment. Under his direction, Chiksan products have become well known and widely used throughout this country and in many foreign countries. His immediate plans call for a much-needed rest after a strenuous 15 years of activity, after which he plans to resume his successful career in the field of sales management.



Earle R. Atkins

PET. ENGINEER & GEOLOGIST WANTED Petroleum engineer and geologist with field experience, well completion practice, and equipment mud control experience Belridge section Kern County. Give age, education, salary expected. Box 40, c/o California Oil World, 117 W. 9th St., Los Angeles 15, Calif. 8-20b

THIS LAUGH

OFF!!

Marketing one morning when her maid was taking a day off, the lady of the house came upon the girl wheeling a rickety carriage holding twins. She looked at the babies and then at the maid.

"Whose babies are these?"

"Mine," was the answer.

"Yours? Why, Maggie, I thought you were an old maid."

"Well, ma'am, I am. But I ain't a fussy old maid."

"If you're offered a second piece of cake, Willie, be a little man and refuse it, just as nicely as your father does."

Willie returned from the party. Fondly, his mother asked, "Did you refuse the second slice of cake, as I told you?"

"Oh yes, mother—just like father does. I just said, 'Take that damned stuff out of my sight.'"

"I'm sick of marriage. Tom hasn't kissed me since I came back from my honeymoon."

"Why not divorce him?"

"Huh? Oh, I'm not married to Tom."

A young lady oyster had just returned from her first date with a lobster and was telling her oyster girl friends about it.

"He was simply marvelous," she said. "First he looked deep into my eyes. Then he put his arms around me. Then he . . ."

A look of horror came over her as she clutched at her throat and cried out: "My Gawd! My pearls."

There are many examples of confused speech due to excitement. There's this one about a traveler at a railroad station who could not find the porter who had his suitcase. The man rushed to the station master and gasped:

"Nice fix of a station when a suitcase can't find a train. How do you think to match me is all I hope?"

A couple of M.P.'s heard a terrific noise in a pub, and on rushing in found a group of Allied soldiers tangled in a brawl. The M.P.'s untangled the group into three or four British Tommies, two Scotsmen and a couple of Americans.

Everybody but the larger of the two Scotsmen had calmed down and the M.P.'s asked a little Tommy what was the cause of all the row.

"We was orl friendly an' 'avin' dinner together as nice as you please," said the Tommy. "Good food, good ale—everything top 'ole. Then, when we all gets kind of full like, the big Scotty here calls for the check."

At this the big Scot began to splutter and started to break away from the M.P.'s, who grabbed him tighter and asked how come.

"Dinna they tell ya," he blurted out as he again lunged for one of the American soldiers, "that this domn Yank is a ventriloquist?"

Robert St. John, the author, was standing in the lobby of the N.B.C. studios in Chicago's Merchandise Mart, when his luxuriant beard attracted considerable attention.

A woman visitor asked a page the identity of the owner of that hirsute splendor.

"That's St. John," she was told.

"Um-m," mused the visitor, turning again to the beard. "Here for the Baptist convention, I presume."

Speaker: "My friend, I think that Roosevelt is the greatest man this country has seen."

Farmer: "I'm agin' him."

Speaker: "Don't you know that behind every man there is a supreme power which controls and influences him?"

Farmer: "I'm agin' her, too."

With graceful feet, a maiden sweet
Was tripping the light fantastic,
When suddenly she tore for the
dressing room door—
You can't trust this wartime elastic.

Road signs are frequently prophetic. For example:

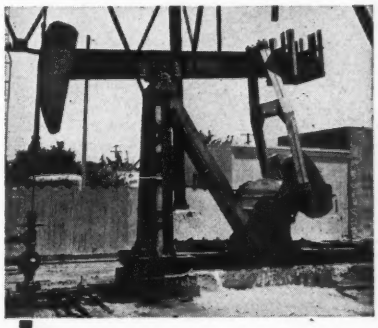
"Soft Shoulders."

"Dangerous Curves."

"Men at Work."

"Danger."

"Look Out for Children."



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California Oil and Gas Assn. Names Don E. Gilman

Ralph B. Lloyd, president of the California Oil and Gas Association, on August 21st announced the appointment of Don E. Gilman to the newly-created office of executive vice president. The appointment follows recent consideration by the board of directors of enlarging the scope and functions of the Association. Mr. Gilman will assume his new duties September 1.

Don E. Gilman

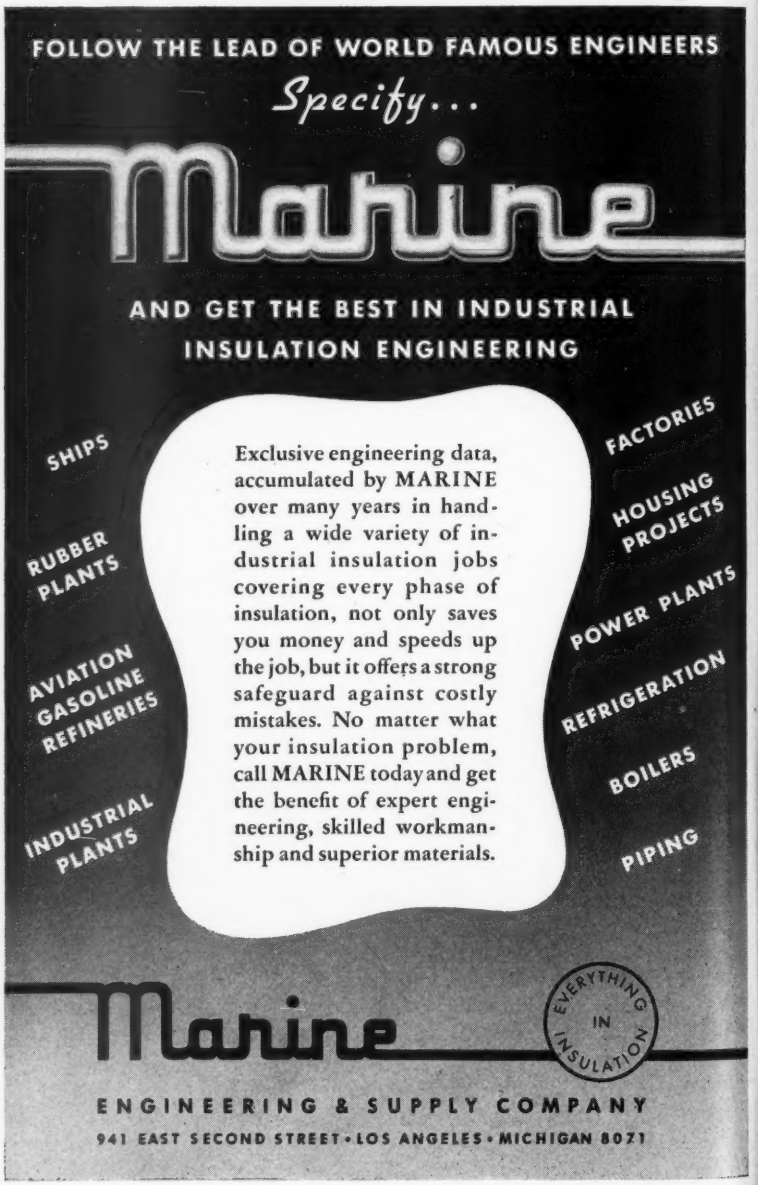
At the same time, Mr. Lloyd announced the promotion of D. S. Kilgour from the position of assistant secretary, which he has held for a number of years, to the office of secretary of the Association.

D. S. Kilgour

Speaking of Mr. Gilman's appointment, Mr. Lloyd said, "Don Gilman is eminently qualified, for although he has not been identified with any of the oil or associated companies, he has long been familiar with the problems of the oil industry. His wide acquaintance with petroleum people, as well as in Pacific Coast advertising, newspaper, radio and business circles, adapts him particularly to the extension work the Association expects to do."

To accept the position of executive vice president of the California Oil and Gas Association, Gilman has resigned as vice president and western executive of the Blue Network Company. Prior to that, he was vice president of the National Broadcasting Company. He has been associated with advertising, public relations and executive administration all of his business life. He was formerly president of the Pacific Advertising Association and vice president of the American Federation of Advertising. In 1938 he was president of Alpha Delta Sigma, and is at present consulting professor in business management of the Graduate School of Business at Stanford.

"No industry has contributed more to the war effort than the oil industry," said Mr. Gilman, "and I am happy to be affiliated with it."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